INQUIRER, OWNED BY COLONEL JAMES ELVERSON, OF PHILADELPHIA, RUSHES ALONG APPARENTLY WITH THE EASE OF THE WEST WIND, BUT ONE LOOKING BELOW WILL FIND THAT SHE IS URGED ON BY A PAIR OF DUESENBERG MOTORS

YACHTING

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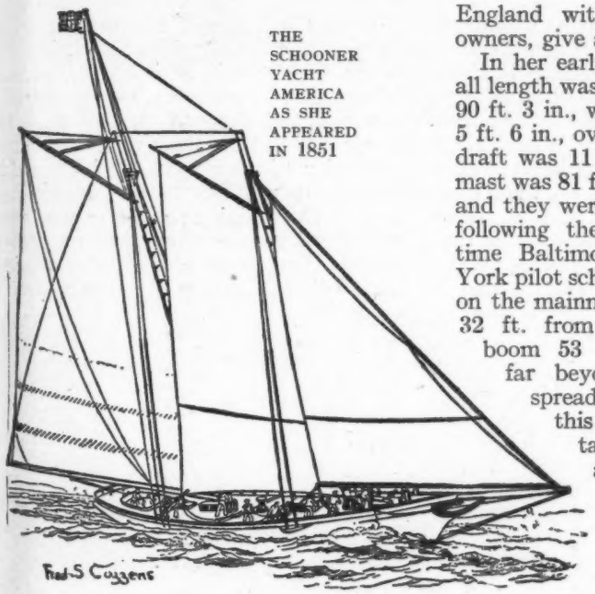
AMERICA

The Famous Old Schooner that Sailed to England in 1851 will be Overhauled, Refitted and Rigged as She was 65 Years Ago.

By CYRUS WILSON



THE SCHOONER YACHT AMERICA AS SHE APPEARED IN 1851

THOUGH rebuilt and rerigged several times in the sixty-odd years of her existence there is in the masts the graceful sheer and clipper bow of the famous old America something that causes men who love boats to pause in admiration. Since 1851, the year in which the little American schooner crossed the Atlantic to race against the fastest yachts in British waters, her name has been honored and so long as yachting history shall survive the cup she won, and which bears her name, will be the trophy that stands for the last word in speed under sail.

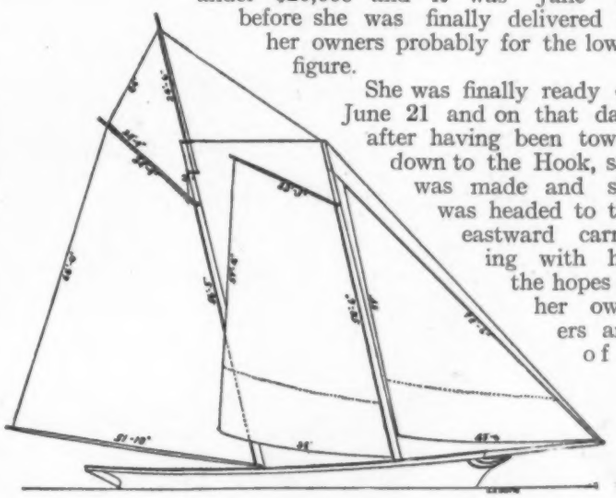
America is a vessel of about 140 tons displacement. She was built as a keel boat; differing in that respect from the prevailing centerboard type, at the time of her building, so common in American yachts. She was constructed largely by the "rule of thumb" method used in those days, and George Steers is credited as having been her designer. In form she followed the type evolved by Steers in the Mary Taylor, a famous pilot boat of that time, had a very sharp entrance with concave forward sections and her beam was carried well aft, ending in an easy run. Her lines, which are shown here and which are said to have been taken off in England without the knowledge of her owners, give an excellent idea of her shape.

In her early racing days America's overall length was 101 ft. 8 in., water line length 90 ft. 3 in., width 23 ft., overhang forward 5 ft. 6 in., overhang aft 2 ft. 6 in., and her draft was 11 ft. The length of her mainmast was 81 ft. and her foremast 79 ft. 6 in., and they were stepped with excessive rake, following the custom of the famous old time Baltimore clippers and of the New York pilot schooners. A topmast was carried on the mainmast only. Her bowsprit was 32 ft. from tip to heel and her main boom 53 ft. in length, and projected far beyond the taffrail. Her sail spread was 5263 square feet and this spread of canvas was contained in a mainsail, foresail and single jib. Her hull was built with infinite care and in the substantial manner of those days. Her planking was of white oak 3 inches in thickness while her deck was of yellow pine. It is interesting to know that she was coppered on the bottom to the waterline.

Her lay-out below included a main saloon extending from the mainmast aft, around the sides of which were six built-in berths with transom seats in front. A short passageway at the after end of the saloon led through a companionway to a small cockpit aft, there being a bathroom and a large clothes locker on opposite sides of the passage. Forward of the saloon were four large staterooms. Then came the galley and pantry and a large foc's'le forward containing accommodations for about fifteen men.

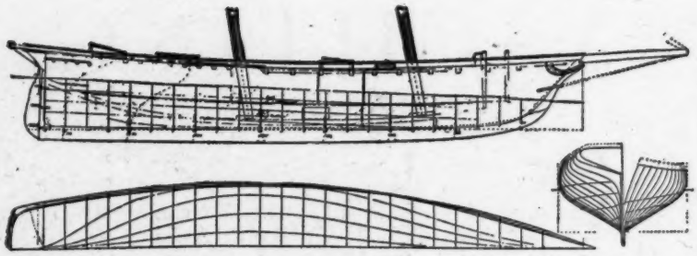
As every one knows America was built by a syndicate of New York Yacht Club members, among them being Commodore John C. Stevens, Edward A. Stevens, George L. Schuyler, Col. James A. Hamilton, J. Beekman Findlay, and Hamilton Wilkes. The contract for the building of America was given to William H. Brown, who had a shipyard at the foot of East 12th Street in New York and by whom Mr. Geo. Steers, her designer, was at that time employed probably in the capacity of foreman. The contract that was made with Brown was a curious document, for by its terms the builder stood to lose much without any prospect of gaining. The price for the yacht fully equipped was to be $30,000 and the craft was to be ready for delivery by April 1st, 1851. When ready for sea Mr. Hamilton Wilkes, a member of the syndicate, was to give her a twenty-day trial at the syndicate's expense. If she did not prove the fastest vessel in the United States the syndicate need not accept her. If she was satisfactory the syndicate had the option of taking her to England to race and if she was not successful there they could even then return her to Brown. A one-sided contract I should say, but I know of boat builders today who build boats under similar stipulations. The boat was not ready on contract time because boats never are. She was to be finished on April 1, and on May 24, when she was still not ready, the syndicate offered to purchase her outright for under $20,000 and it was June 18 before she was finally delivered to her owners probably for the lower figure.

She was finally ready on June 21 and on that day, after having been towed down to the Hook, sail was made and she was headed to the eastward carrying with her the hopes of her owners and of a



FOLLOWING THE BEST PRACTICE OF THOSE DAYS, THE MASTS OF AMERICA WERE STEPPED AT AN EXTREME RAKE

large part of the American people for she was going forth to meet the pick of the English yachting fleet. On her maiden voyage across the Atlantic she made some excellent daily runs, the longest being 284 miles, the passage requiring twenty days to Havre, France, where the yacht was to refit preparatory to meeting the English fleet on the other side in the Solent.



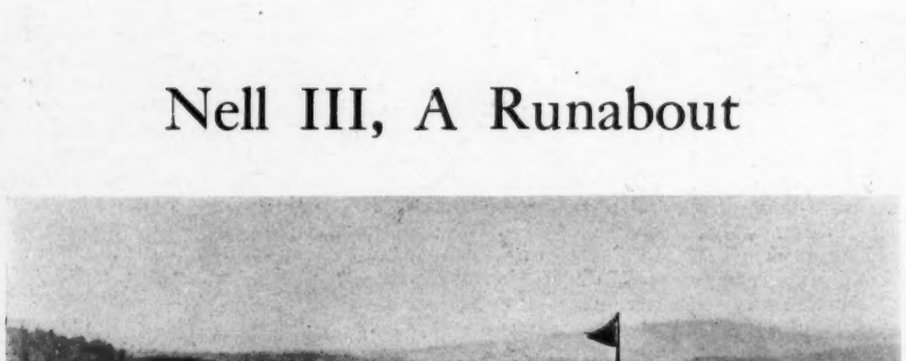
WE ARE INDEBTED TO MR. WM. P. STEPHENS FOR THE LINES OF AMERICA

It is an old story how her owners made every effort to arrange a match with English yachtsmen for, though the Englishmen were most hospitably inclined toward the visitors, they showed a strong disinclination to match their yachts against the American boat and no effort was made on their part to arrange a special match or to put up a suitable trophy to race for. Commodore Stevens first offered to sail a match against any of the schooners and when this was not taken up he enlarged the challenge to include cutters as well. This meeting with no response and, thinking that if the stakes were made large enough they might prove attractive to some of the English owners, the Commodore had posted in the club house at Cowes a challenge to sail the America against any British vessel whatever for any sum from one to one thousand guineas merely stipulating that there should not be less than a six-knot breeze, but there was nothing doing. Sometime after this Commodore Stevens was notified that there would be an open regatta of the Royal Yacht Squadron around the Isle of Wight on August 22nd for which all of their boats would be eligible and which would be sailed without time allowance. He was assured that America would be welcome if he desired to enter her.

This race was for a trophy, put up by the club, valued at one hundred guineas and it is this cup that has since been known as the America's Cup for she won it hands down, beating 17 representative English yachts some of them being racing cutters and one of them, the Volante, a new yacht just out that year.

Since that time America has had a varied career including that of a blockade runner during our Civil War. She has been rerigged, partly rebuilt a number of times, and for some time past has been lying at Boston apparently forgotten, but not quite! for, when it was learned that she was about to be sold to be used as a commercial vessel between New Bedford and the Cape Verde Islands, a number of Eastern Yacht Club members headed by Mr. C. H. W. Foster owner of the Finback and a prominent "down east" yachtsman negotiated for her purchase and through the office of Hollis Burgess of Boston, these men came into the possession of the famous old boat and have planned to refit her as she was originally, even to the raking masts. She is in remarkably good condition and will be used as a yacht as long as she holds together and after that will be used as a museum and thus preserved.

Nell III, A Runabout



NOW THAT THE LARGER BOATS ARE ON GOVERNMENT SERVICE THE HIGH SPEED RUNABOUT IS COMING INTO ITS OWN

OFTEN on Lake Sunapee, N. H., Nell III may be seen, her bow high out of water tearing across the Lake at top speed, driven by her owner, Mr. Robert K. Eaton, President of the John Hancock Life Insurance Company.

Nell III is a 29-ft. by 6½-ft. V-bottom, craft designed by William H. Hand, Jr., planked with mahogany and powered with a 100 horse power 4-cylinder, Sterling motor. Her top speed is 28½ miles.

Runabouts of this class in the past few years have been developing rapidly, and initiated the lover of water sports to new sensations. Engine and boat builders report a tendency on the part of recent owners of cruisers now in patrol service to order runabouts so that they may remain in touch with water sports and it is handy little craft of this type that will make it easy for boat lovers to keep afloat.

MR. ALBERT PACK'S HIGH SPEED CRUISER KUMAGIN IS ONE OF THE FINEST BOATS ON THE GREAT LAKES AND OF A TYPE THAT IS BECOMING MORE AND MORE POPULAR

Kumagin, a New 76-ft. Express Cruiser

A 23-Mile-an-Hour Van Blerck Powered Cruiser Designed and Built by the Great Lakes Boat Building Corp.

THE AFTER COCK PIT IS LARGE AND COMFORTABLE

THE 76-ft. express cruiser, Kumagin, is one that is of unusual interest. She was built for Mr. Albert Pack, of the Hubbard Steel Foundries of East Chicago, and is one of the finest craft of her type afloat. She is unique in being the largest V-bottom boat so far launched, although there are some new 85-footers under construction in the east that will soon have this distinction. Boats of the V-bottom type perform well in any kind of weather and Kumagin is no exception, for on her maiden cruise of upwards of two thousand miles she encountered some very bad weather.

The cabin plan of the boat shows quarters forward for her crew, abaft of which there is a galley followed by a main saloon, bridge deck, engine room, owner's stateroom and bath, a guest's stateroom and, in the stern, a large cockpit, thus accommodations are provided for a party of nine and a crew of four. The interior finish of the craft is of mahogany and the upholstery of French broadcloth in color to harmonize with the joiner work.

AND THE BRIDGE DECK FROM WHENCE THE CRAFT IS CONTROLLED WELL WEATHER-PROTECTED

The planking is double, the inner of the layers being of cedar laid diagonally, while the outer one is of mahogany with strakes running fore and aft. Battens are behind all of the fore and aft seams, a detail that makes the construction doubly strong. The frame is of white oak, there being sawn forms with steam bent frames between, and all placed on short centers.

Two 8-cylinder Van Blerck motors are installed and they propel the boat at a speed of 23 miles an hour. In addition to the power plant there is a Matthews lighting set that furnishes electricity for lighting and electric heaters.

The boat is handled from the bridge deck and all engine controls are brought within convenient reach of the helmsman. The bridge deck is of sufficient area to allow plenty of room for wicker chairs and is protected by wind shields extending entirely across its forward end. This, in addition to side weather cloths and a permanent

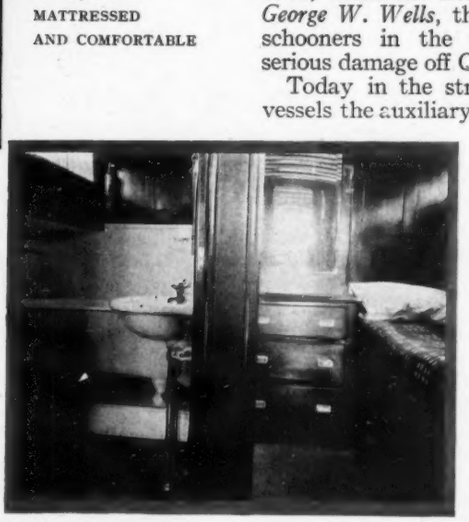
WHILE BELOW DECKS THE ACCOMMODATIONS INCLUDE

A MAIN CABIN FINISHED IN MAHOGANY AND WHITE

awning, makes this a mighty comfortable part of the boat.

Mr. Pack's cruiser is another example of the unusual strides that the art of boat designing and building have made in the last five or six years. Here we have a boat of comparatively small size yet with accommodations equal to those in a small apartment ashore; there is speed aplenty and it is obtained without enormous engines and a lot of vibration, noise and smoke, and boats of this type have the ability to sail anywhere within reason. Ten years ago she would have been a marvel. At that time the high speed gasolene motor was a very unreliable mechanism prone rather to break down than to run continually and then boats of the V-bottom model were employed only as small runabouts and there were not very many of them.

AND HAVING PULLMAN BERTHS THAT DROP DOWN WITH LITTLE EFFORT AND FORM MOST SPLENDID SLEEPING BUNKS, WIDE, WELL MATTRESSED AND COMFORTABLE



THERE IS A SINGLE STATEROOM WITH A BUILT-IN BUNK AND DRESSER AND ADJOINING IT A SPLENDIDLY FOUND BATHROOM AND THE DESIGNERS FORGOT NOT THE TUB

The Yankee Schooner

IN the mind of the average man, the days of sailing ships are over. He sees one occasionally, but he thinks it a straggler from a passing epoch, a ghost of former splendors. The steamship is supreme. It has forever supplanted the sailboat.

Yet were he to visit Erie Basin in Brooklyn and see its forest of masts or catch a glimpse of the wonderful, highly polished, brand new, five-masted schooner which lay at 129th Street and the Hudson River, New York, all summer, it would set him thinking. What if most of the modern sailing vessels do have auxiliary power of some kind? The mechanical power is *auxiliary* and they are still sail ships—things of marvelous grace and beauty. Their number is not as negligible as most people imagine, and the exigencies of the shipping crises are constantly increasing it.

American sailing vessels have a fascinating history which stretches back to the dawn of white civilization on the continent. The Jamestown settlers scurried about on the ocean and the rivers in shallow, undecked sailboats. The Pilgrim fathers brought ship carpenters with them to lay the foundation of the mighty merchant marine of the New England states.

About 1700, the colonists began to build a new type of vessel which they called a schooner. In place of the cumbersome square rigging of European tradition, it carried a fore and aft arrangement of sails, simple in design and easily handled. "With a free wind and the booms above the rail," says W. L. Marvin in his book on *The American Merchant Marine*, "every yard of canvas could be made to draw. Close-hauled, the schooner could outpoint any square-rigged craft, and for quickness and sureness in stays was incomparable."

The schooner soon supplanted the existing ketch and brig and for two hundred years has remained the characteristic sailing vessel of the American coasting trade. Baltimore soon became noted for building schooners of superior speed and beauty. The Yankee schooners began to establish their kind in Europe.

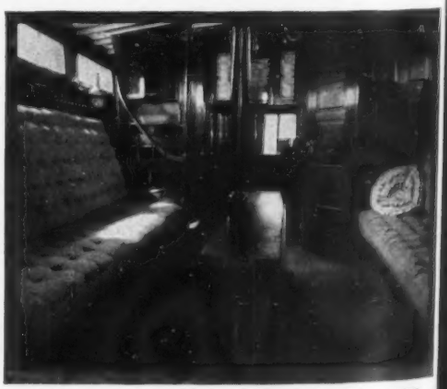
The Revolution was a great blow to Atlantic shipping. Many coasters were captured by the British, but after the war prohibitive taxes on foreign ships engaged in the American coastwise trade drove the latter from the field and reestablished American prestige. Between 1789 and 1812 the domestic tonnage rose from 68,600 to 443,200.

The development of steam navigation brought serious competition, but as late as 1860 the sail coastwise tonnage was double the steam. American seamen clung lovingly to their schooners, brigs or barks and met every advance in steam construction by some ingenious improvement in their own rigs. The evolution of the schooner, in particular, is "an astonishing proof of Yankee maritime resourcefulness."

Starting out as modest craft of 20 to 200 tons with one mast, the schooners have slowly added weight and bulk until they reached a climax in the huge seven-masted monsters now being put out by the Maine yards. Each increase in size, each additional mast, were looked upon askance by the more conservative skippers and declared to be the utmost limit of development. Yet ingenious changes of gear and method have made continual advancement possible. The greatest danger has always been of a sudden squall catching the immense spread of canvas before it could be lowered, yet, because of steam tackle, only sixteen men are now required to handle the 43,000 square feet of canvas on the seven-masted giants.

An interesting coincidence occurred in 1901, when the *Eleanor A. Percy* and the *George W. Wells*, the then only six-masted schooners in the world, collided without serious damage off Cape Cod.

Today in the stringency of commercial vessels the auxiliary sailing schooner is more than coming in for its own. Both on the Atlantic and the Pacific coast shipyards are building wooden auxiliary three, four and five masted fore and aft rigged vessels that are a credit to their designers and builders. Under sail they are fast and because they have auxiliary machinery for working winches are more easily handled than vessels were ever before and the great heavy duty internal combustion motors stowed away in the after end of their holds propel them at a speed in fine weather of from 6 to 8 knots an hour.



THERE IS A CURVED STAIRWAY LEADING INTO THE MAIN CABIN FROM THE BRIDGE DECK

A Universal Wave Line Displacement Hull

A Hull that has a Perfect Wave Form Displacement Curve While on an Even Keel and at Every Angle of Heel up to 30°

By C. ANDRADE

FOR a great many years, Mr. Scott Russell's theory of wave line displacement has been well known to designers, and at the present time some of the ablest naval architects in the country design their sailing hulls strictly in accordance with this theory, i. e., they place their midship section 60% of the load water line length aft from the forward point of immersion, and so shape the underbody that the curve of displacement for the fore body shall be a curve of versed sines, and the displacement curve for the run shall be a trochoid.

In designing their hulls, so far as I know, it has been the practice for naval architects to limit their calculations to the form of the boat when she is on an even keel, but in view of the fact that sail boats are very rarely on an even keel when under way, it has seemed that the displacement curve of the boat when she is heeled down to various angles should be considered quite as much as when she is on an even keel.

In view of the foregoing considerations, I set about designing a hull which should have a perfect wave form displacement curve, not only on an even keel, but for every angle of heel up to 30 degrees, at which angle she brings her gunwale awash.

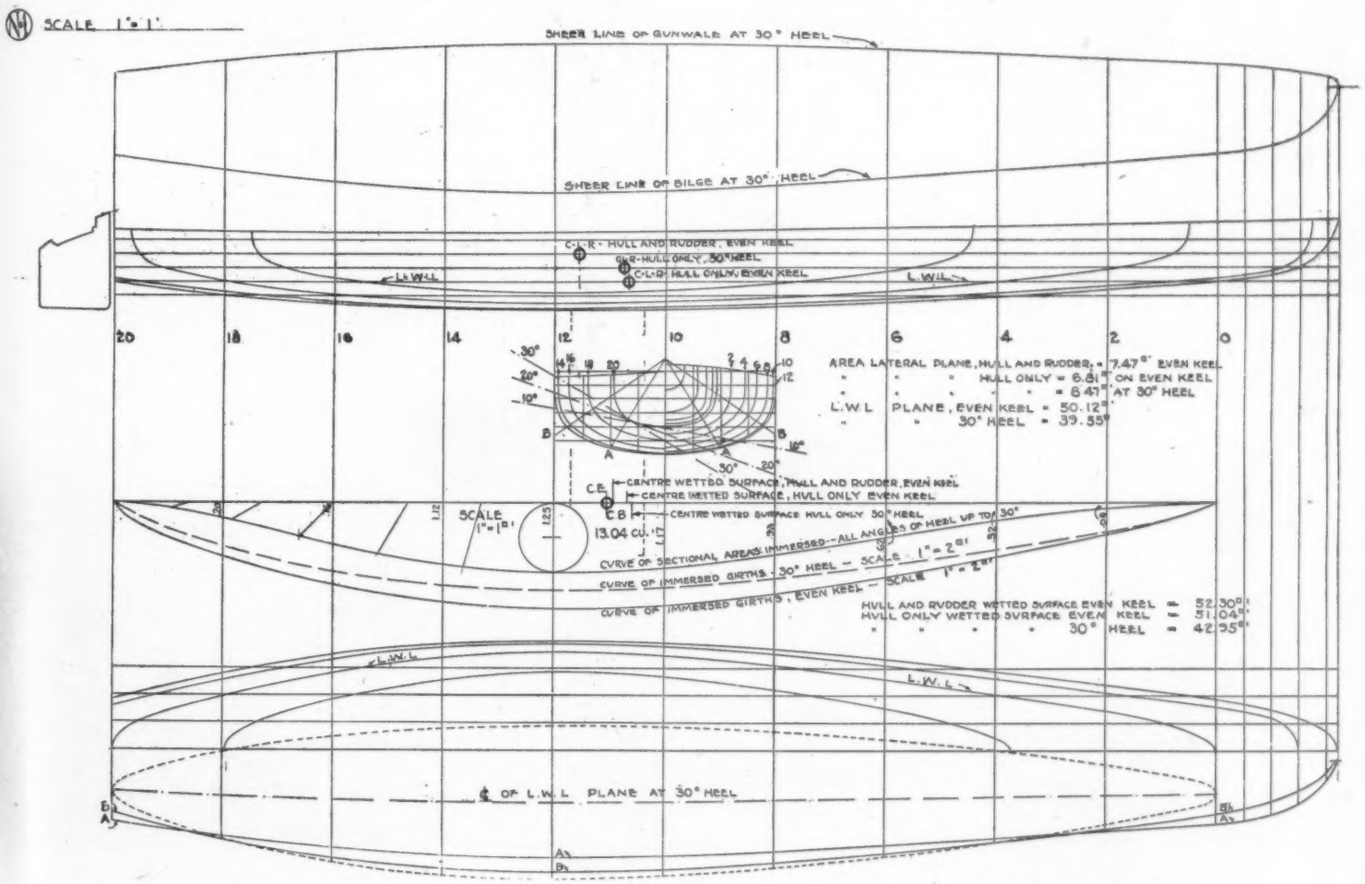
The set of lines, appearing herewith, marked No. 1, shows such a form of hull worked out to completeness. The method of the design is really very simple.

The first step was to establish a midship section. This I did somewhat arbitrarily, taking a form closely approximating half an ellipse, because this form offers a minimum of wetted surface.

With the planimeter, I then determined the area of the transverse section immersed of the midship section. In the particular design shown herewith, this worked out at 1.25 square feet. I then drew a circle with a diameter of 1.25, and on this circle generated a wave line curve in the usual manner, which is well known to the profession.

The next step was to determine the sheer line of the bottom of the hull at its center line. In order to get this, I generated a curve of square roots of the wave line curve, i. e., for every ordinate on the wave line curve, I determined its length numerically, extracted the square root, and used that figure as an ordinate at that particular point. The result was the form of sheer of bottom which is shown in the sheer plan of the hull.

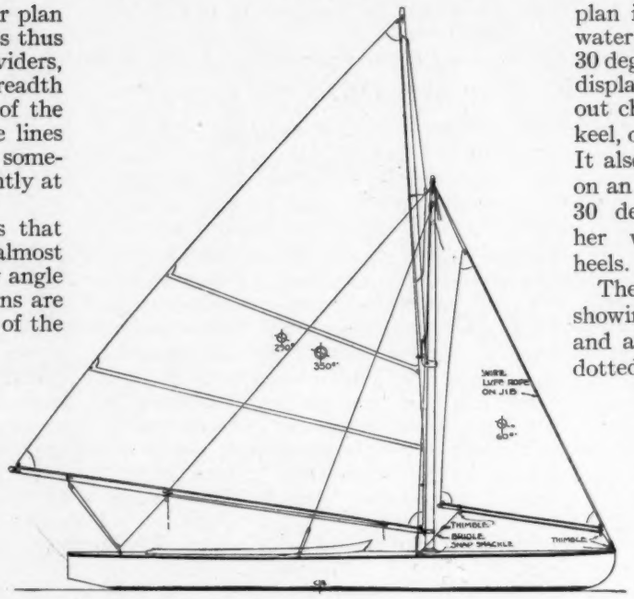
I then laid off a half breadth plan of gunwale, which at first was an exact linear function of the curve of square roots forming the sheer of the bottom. In the particular design shown, I took the second water line


SCALE 1" = 1'
SHEER LINE OF GUNWALE AT 30° HEEL
SHEER LINE OF BILGE AT 30° HEEL
C.L.R. - HULL AND RUDDER, EVEN KEEL
C.L.R. - HULL ONLY, 30° HEEL
C.L.R. - HULL ONLY, EVEN KEEL
L.W.L
L.W.L
AREA LATERAL PLANE, HULL AND RUDDER, = 7.47" EVEN KEEL
" " " HULL ONLY = 6.81" ON EVEN KEEL
" " " " = 8.41" AT 30° HEEL
L.W.L PLANE, EVEN KEEL = 50.12"
" " 30° HEEL = 39.55"
C.E. - CENTRE WETTED SURFACE, HULL AND RUDDER, EVEN KEEL
C.E. - CENTRE WETTED SURFACE, HULL ONLY EVEN KEEL
C.B. - CENTRE WETTED SURFACE HULL ONLY 30° HEEL
SCALE 1" = 1'
13.04 cu.
CURVE OF SECTIONAL AREAS IMMERSED - ALL ANGLES OF HEEL UP TO 30° - SCALE 1" = 2 sq.
CURVE OF IMMERSED GIRTHS - 30° HEEL - SCALE 1" = 2'
CURVE OF IMMERSED GIRTHS - EVEN KEEL - SCALE 1" = 2'
HULL AND RUDDER WETTED SURFACE EVEN KEEL = 52.30 sq.
HULL ONLY WETTED SURFACE EVEN KEEL = 51.04 sq.
" " " " 30° HEEL = 42.95 sq.
L.W.L
L.W.L
℄ OF L.W.L PLANE AT 30° HEEL

THE LINES ABOVE ARE FOR A SAILING CANOE AND IT SHOULD BE RIGGED PREFERABLY WITH TWO CANOE SAILS

above the load water line in the sheer plan as a base line, and using the ordinates thus established, and with proportional dividers, set two to one, I laid off the half breadth of the gunwale from the center line of the boat. For the purpose of fairing the lines forward, I drew this gunwale line in somewhat at the bow, and extended it slightly at the stern.

With this beginning, it is obvious that the resulting displacement form will almost inevitably produce a wave line at any angle of heel, if homologous forms of sections are maintained throughout the length of the body, for the reason that each section will be proportioned to the depth times the beam, and as the depth and the beam at each point vary as the square roots of the wave line curve, the resulting area, which is a function of the depth and the beam at each point will almost inevitably work out to a true wave line form. I found that this theory worked out in practice, because the lines required very little fairing after I had laid off my sheer line of the bottom and the gunwale line, as stated above.



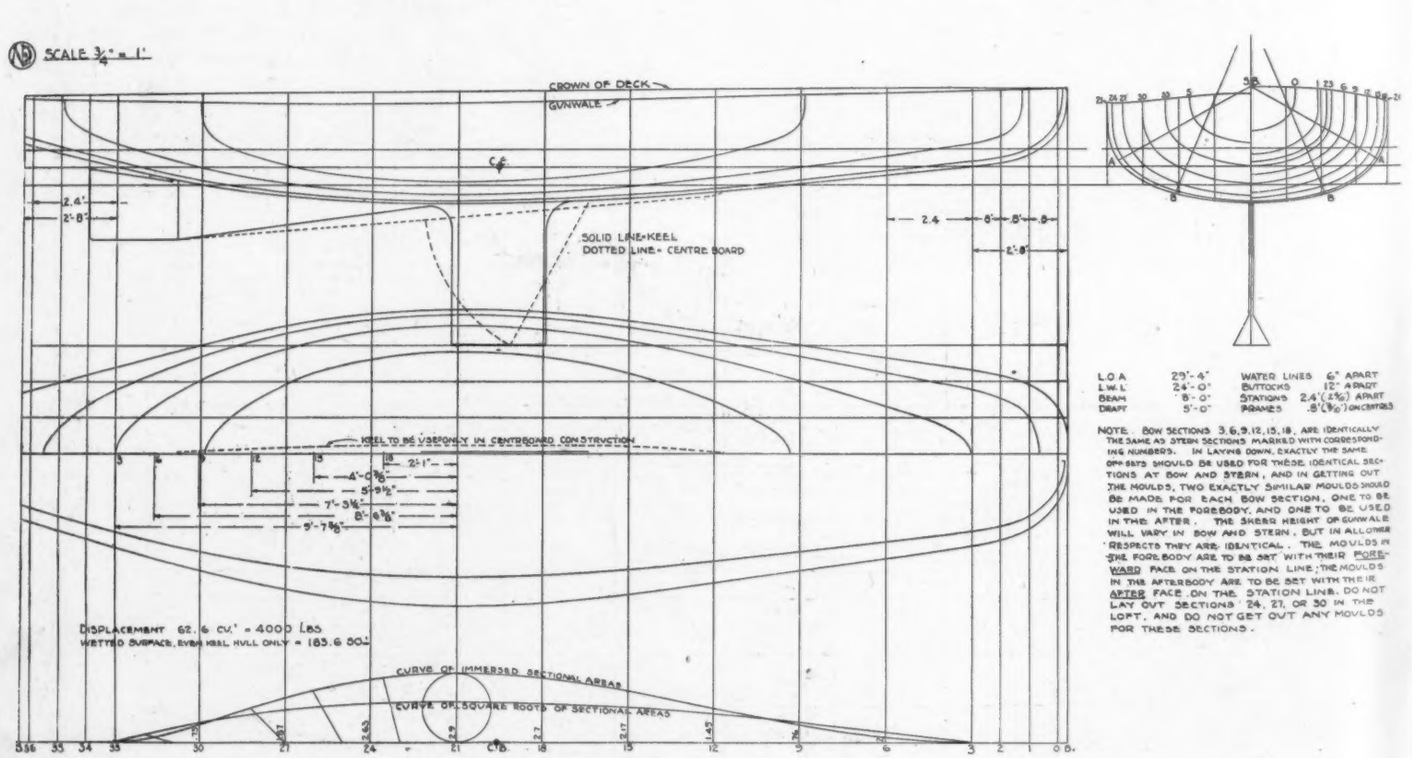
THE SAIL PLAN IS MODERATE BUT WELL BALANCED

As a matter of fact, it is necessary to design only one end of this boat, and the other end must necessarily be fair. It will be noted that inevitably there will be sections in the run which will have exactly the same area immersed as corresponding sections in the bow, and by making the form of the run sections identical with the bow sections having the same area, it will be found that after fairing one end of the boat, the other end will come fair automatically.

In No. 1, I have shown the sheer plan, and in the dotted lines over the sheer plan, I have indicated the sheer of the gunwale and bilge at 30 degrees of heel. The body plan is in the usual form, with the heeled water lines for 10 degrees, 20 degrees and 30 degrees indicated. No. 1 also contains the displacement curve, which holds true without change, whether the boat is at an even keel, or at any angle of heel up to 30 degrees. It also shows her curve of immersed girths on an even keel, and also when heeled to 30 degrees, and it will be noted that her wetted surface diminishes as she heels.

The half breadth plan is in the usual form, showing unusually easy diagonals A and B, and attention is particularly drawn to the dotted load water line plane when the boat is at 30 degrees heel. It will be observed that this plane is almost perfectly symmetrical, and is in marked contrast to the distorted load water line plane obtained by the usual form of hull when heeled.

The hull indicated in No. 1 is for a sailing canoe, and should be rigged preferably with two canoe sails. By reason of her small wetted surface and easy lines, she should prove a very fast boat, and as will be seen by reference to the half breadth plan, the entire center of the load water line plane at 30 degrees of heel moves out a great distance to leeward. Of course, it is obvious from a glance at the midship section that the boat will have very little initial stability; but in a canoe, stability is derived largely from the accurate balancing of the crew.


SCALE 3/4" = 1'
CROWN OF DECK
GUNWALE
SOLID LINE=KEEL
DOTTED LINE= CENTRE BOARD
KEEL TO BE USED ONLY IN CENTREBOARD CONSTRUCTION
DISPLACEMENT 62.6 CU.' = 4000 LBS
WETTED SURFACE, EVEN KEEL HULL ONLY = 185.6 SQ.'
CURVE OF IMMERSED SECTIONAL AREAS
CURVE OF SQUARE ROOTS OF SECTIONAL AREAS
L.O.A. 29'-4"
L.W.L. 24'-0"
BEAM 5'-0"
DRAFT 5'-0"
WATER LINES 6" APART
BUTTOCKS 12" APART
STATIONS 2.4' (2⅜") APART
FRAMES .8' (9⅝") ON CENTRES
NOTE. BOW SECTIONS 3, 6, 9, 12, 15, 18, ARE IDENTICALLY THE SAME AS STERN SECTIONS MARKED WITH CORRESPONDING NUMBERS. IN LAYING DOWN, EXACTLY THE SAME OFFSETS SHOULD BE USED FOR THESE IDENTICAL SECTIONS AT BOW AND STERN, AND IN GETTING OUT THE MOULDS, TWO EXACTLY SIMILAR MOULDS SHOULD BE MADE FOR EACH BOW SECTION, ONE TO BE USED IN THE FOREBODY, AND ONE TO BE USED IN THE AFTER. THE SHEER HEIGHT OF GUNWALE WILL VARY IN BOW AND STERN, BUT IN ALL OTHER RESPECTS THEY ARE IDENTICAL. THE MOULDS IN THE FOREBODY ARE TO BE SET WITH THEIR FORWARD FACE ON THE STATION LINE; THE MOULDS IN THE AFTERBODY ARE TO BE SET WITH THEIR AFTER FACE ON THE STATION LINE. DO NOT LAY OUT SECTIONS 24, 27, OR 30 IN THE LOFT, AND DO NOT GET OUT ANY MOULDS FOR THESE SECTIONS.

HERE IS SHOWN A SIMILAR FORM OF HULL BUT IT IS OF A MORE BURDENSOME BOAT THAN THE CANOE ON PAGE 207 AND HAS A SLIGHT OVERHANG AT THE STERN

In No. 2, I have shown a similar form of hull with the overhang carried out to a moderate extent at the stern, and with the same universal wave line form of displacement.

No. 2 shows the sheer plan, body plan, half breadth plan and diagonals. By reference to this half breadth plan, the rationale of the design is more clearly illustrated than in No. 1. In No. 2, the curve of immersed sectional areas is shown graphically, and the curve of square roots of sectional areas is also shown graphically. The truth of these curves is demonstrated by the fact that they cross at unity, i. e., where the ordinate for the area equals 1, the ordinate for the square root is also 1.

It will be noted by reference to the half breadth and sheer plans that the points for water lines, buttock and diagonals for section marked 18 in the run are all identical with section 18 of the bow. In a similar manner, section 15 of the bow is identical with section 15 of the run (the latter mentioned section in the run falling between regular stations 24 and 27). In similar manner, 3, 6, 9 and 12 of the bow are all duplicated exactly at the stern.

This boat I have shown as a small fin-keeler, though she may also be built as a center-boarder with changes as shown by the dotted lines, and believe that she would make a very handy and fast small boat. Of course, the heavy curve at the bow will necessitate double planking, either laid on longitudinally, or as I prefer diagonally. I used the diagonal method of planking construction in the Parrakeet, and found it an unqualified success, and it also has been thoroughly proven on the life boats of transatlantic liners.

I have given this little boat a sliding gunter sail plan, which will probably show the best results with this type of boat.

I shall be pleased to hear from anyone who builds to these lines.

New 36-Ft. Life Boats For Coast Guard Service

The Coast Guard Stations of the U. S. Life Saving Service are Supplied With the Finest Equipment Obtainable. The Most Important, However, Consists of Boats, and These During the Last Eight or Nine Years have been Motor Equipped

By M. E. MUTCHLER

THE type of life boat that guards our coasts, protecting the lives of the shipwrecked, is not the result of fads or fancy. The design, construction, materials, and equipment are such as to leave no element of chance in a service so highly important and hazardous.

The accompanying photograph illustrates one of the new type self-bailing, self-righting motor lifeboat recently built by the Camden Anchor-Rockland Machine Company, at Camden, Maine, for the U. S. Coast Guard. All of these craft are 36 ft. overall by 8 ft. 8 in. beam.

The first two of the boats have just been delivered at the Coast Guard Station, New York, having made the run to New York from Camden. They left Camden Friday night, August 3, and arrived at Marblehead at 5 P. M. Saturday, on the way to New York, everything working fine. The initial trials were held at Camden, under the supervision of U. S. Inspector Schofield; each craft having been given a 7-hour run at a speed of 8 1/10 knots.

The power plant in these boats is a 40 H. P. 4-cylinder, Sterling motor, fitted with both electric and hand starters.

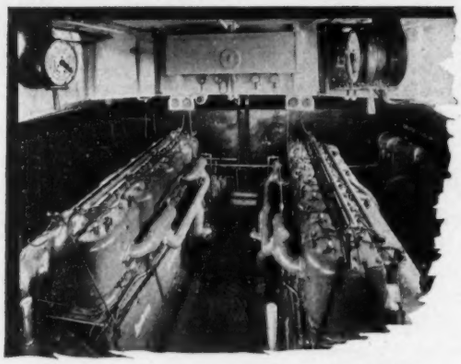
THE NEW U. S. COAST GUARD BOATS RECENTLY BUILT ARE ABLE CRAFT AND ALTHOUGH THEY ARE SUPPLIED WITH THE LUGGER-RIG OF MODERATE SAIL AREA ARE POWERED WITH STERLING MOTORS

Lifeboats similar to these have been used by the U. S. Coast Guard for many years and they are a well known type along the U. S. Coasts. The old style boats were fitted with centerboards, but in the new type boat the centerboard is omitted, with the necessary changes made in the design and construction to do away with the centerboard. The cockpit deck is above the water line, water tight, and is fitted with ten self-bailing copper tubes. All the available space under the cockpit deck, and all available space under the side seats in the cockpit, as well as the space under the floor in the forward end is filled with air cases made of clear white pine and covered with canvas laid in glue and painted several coats. The boats are so planned that when placed bottom up they will right themselves and at the same time bail themselves out. The builders were obliged in their contract to put one of the boats through such a test. It was a success; the boat righted herself in three seconds and was free of water in fourteen seconds. These boats are fitted with two masts and lug sails, fitted to take eight oars and will easily accommodate fifty persons.

Boats built for the U. S. Coast Guard service are from designs evolved after many years of strenuous service, as their business is one of life and death both for the crews of the stranded vessels and those of the life saving stations. Year upon year improvements have been made and until the advent of the modern reliable gasolene motor these craft depended wholly upon oars and sails for propulsion.

Anado

A wholesome type of boat built for Mr. J. Adolph Mollenhauer that is now undergoing reconstruction to better fit her for use in this little war of ours against the disciples of Kultur.



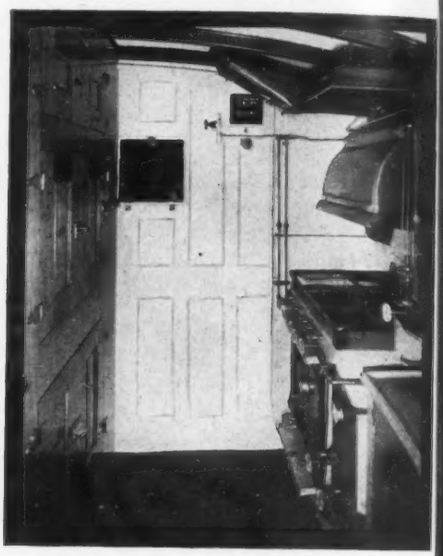
TWO 8-CYLINDER SPEEDWAY ENGINES ARE

INSTALLED UNDERNEATH THE BRIDGE DECK

ANADO is a 70-ft. motor yacht with a beam of 13 feet and 3 feet draft built for Mr. J. Adolph Mollenhauer of Bay Shore, L. I., by the Gas Engine & Power Co. & C. L. Seabury Consd. The boat is a noteworthy addition to the large fleet of motor craft so far built. She is especially interesting just now as she is of a type especially valuable to the Navy Department. In fact at this writing Anado is undergoing the slight reconstruction necessary to make her most useful for use in this little war of ours against those Germans.

THERE IS A DOUBLE STATEROOM FORWARD

THE MAIN SALOON IS WELL LIGHTED



THE EXCEPTIONAL GALLEY

Had Anado been completed as planned by her owner she would have been one of

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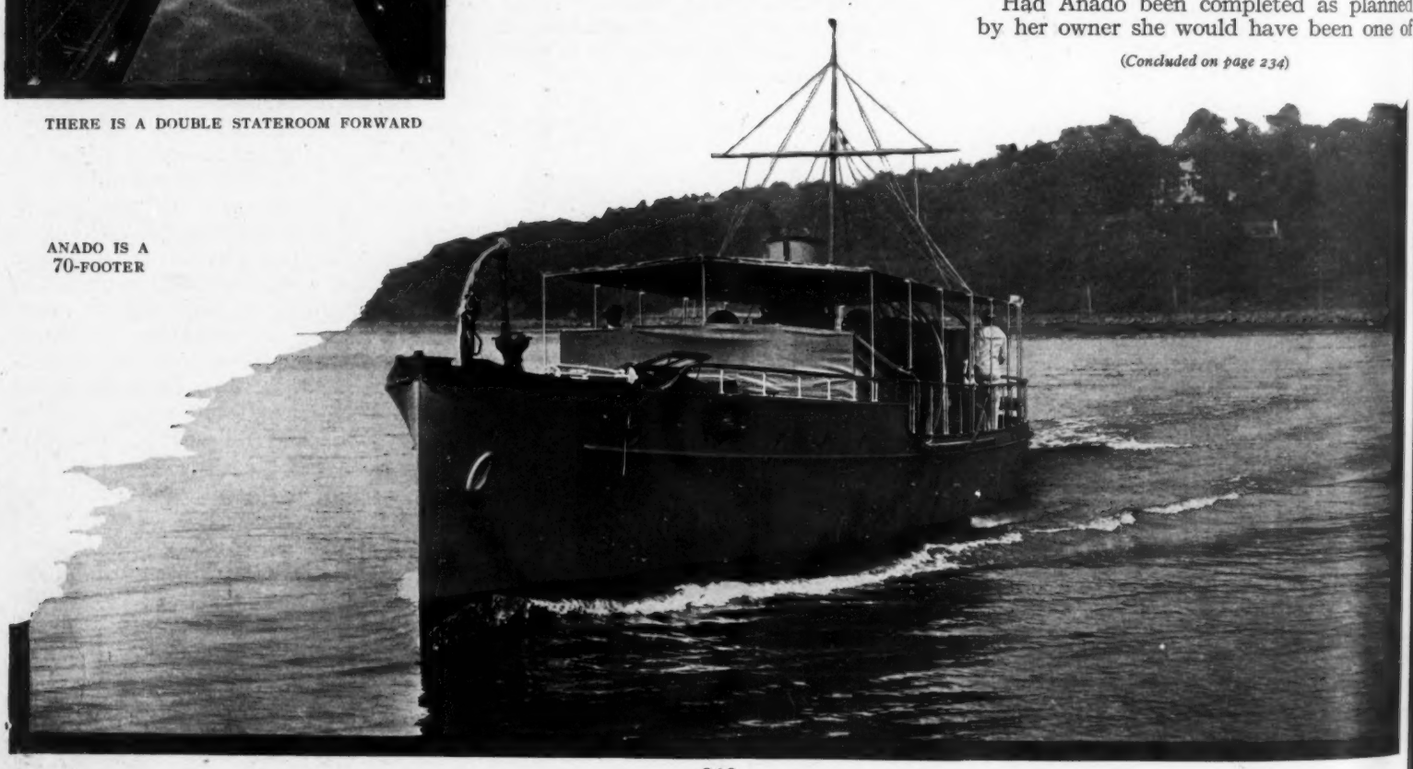


ANADO IS A 70-FOOTER

A Second Mate's Yarn

A Deep Water Voyage Around the Cape of Good Hope to South East Africa in the Bark Lillian. Life on an American Windjammer from the Viewpoint of the Quarterdeck.

Chapter V

By WM. P. BRADLEY

THE fine weather in which we left Port Natal for the voyage to Barbados was not to last long, and we had not even time to get shaken down into sea routine, or to get rid of the fever which a number of us had contracted ashore, before we were fighting gales and high seas again. The first watch of the second night out found us shortening sail once more with all hands hard at it. The fair wind we had carried for 24 hours jumped around to S. W., dead ahead, and continued to pipe up until we had the old box down to lower topsails and staggering like a drunken man under these, as she was light and tender in ballast.

When that gale blew out we made sail again and by the fourth day out from Natal we had made good 250 miles, only to lose most of it when on that night the wind shifted to S. W. again and we began to shorten down at 9.30 at night, keeping at it all night. By morning it was blowing a real live gale to which we could only show lower topsails, fore staysail and main spencer. There was nothing to do but heave her to and see her go sliding off to leeward while our hard-earned miles went slipping away from us nearly as fast as we had made them. A ship in ballast in a hard head gale is a poor thing to hang on, and slides all over the lot.

The new boy, Bertie, made lots of fun for the forecastle as well as for those aft, and the men were horsing him all the time. He was terribly sea sick during these first days, but he insisted it was the rich food he was getting, to which his stomach wasn't accustomed. As this consisted of salt-horse that had made the voyage from New York, and hard bread, it might have been so. The men would insist on his eating heartily, even when he was sick, inventing fancy names for the food, and of course he didn't keep anything on his stomach. It was fun for the men but hard on the poor boy; but he was not of much use on deck anyhow, so we didn't miss his services to any extent.

The men were tractable enough now that the two trouble makers were gone, and were willing, which was fortunate, short handed as we were. We still had the Frenchman aboard, John, the Swede, Murray and the rest of them, and except for the fact that they were too slim a crowd to handle sail smartly, they were an efficient bunch.

Between Port Natal and the Cape of Good Hope we had four hard gales of wind. One was as hard a blow as I had ever seen, with a tremendous sea running in which the old Lillian was knocked about pretty severely. It started in during the middle watch when I was awakened by the men taking in sail, throwing the coils to the deck over my head and singing out at the clew lines and buntlines. I knew the call would come soon and was up and had my oilers on when the mate shoved my door back with the laconic "Shorten sail, Mr. Bradley." We were taking in sail till daylight, at which time we had her down to lowers, spencer, fore staysail and reefed spanker.

All day it kept hardening and the sea kept rising so that the "old man" finally had to heave to. So it was brace up sharp and put the helm down until she came up to within 6 or 7 points of the wind, the first sea that struck her forward of the beam, sweeping her long, open quarter deck so that the men jumped for the rigging, shrouds, or anything that offered a secure hold. I saw the lad, Bertie, emerge from the deluge choking and spitting, soaked to the skin and with sea boots filled, his reaction being so slow that the sea buried him before he could scramble out of the way. It was a wonder he did not go overboard. He was a sorry spectacle, that brought forth roars of laughter from the more fortunate ones who had scrambled above the worst of it.

Once hove and we felt the full force of the wind and in less than half an hour the fore lower topsail went with a bang, splitting from bolt rope to bolt rope in the bunt.

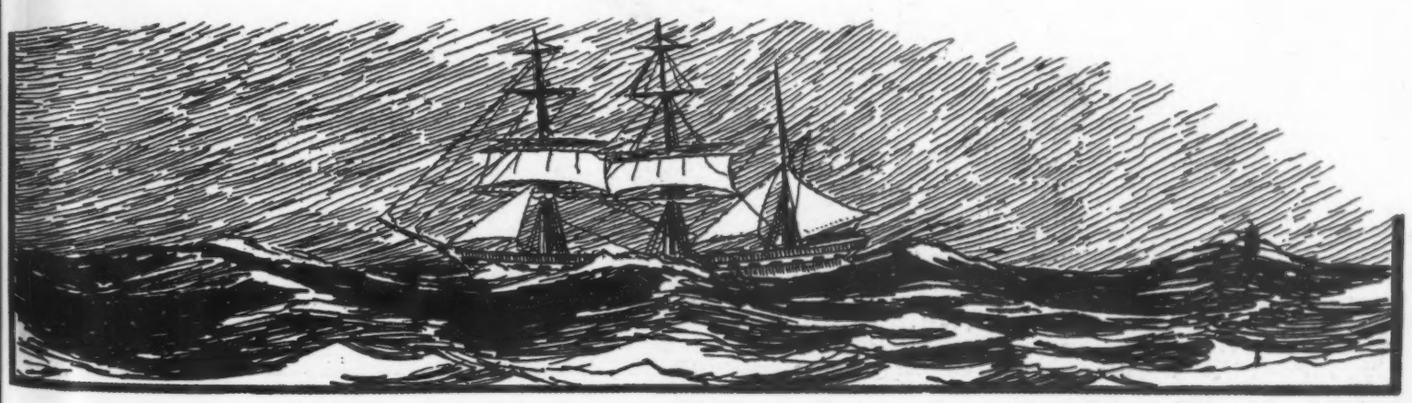
"Lay aloft, lively, and stow fore lower topsail," bawled the mate. "Save all you can of it."

But it was snapping like a gattling gun and only some tatters were left around the clews when we finally got it frapped. After that the fore topmast staysail blew out and we had to break out another and stouter one and bend it on. Still the gale kept increasing and at 8 o'clock that night we goose-winged the main lower topsail. This took all of my watch forty minutes to do, with the Frenchman at the yardarm, almost blinded by the driving, stinging rain.

All night it blew, the squalls being terrific, but at daylight it began to moderate. This was fortunate, for the wind was S. W. and we were hove to on the port tack, drifting N. E. with the coast only thirty-five miles to leeward. As soon as it let up, we began to get sail on her and claw off, sending up a new fore lower topsail and bending it on as soon as it was light enough to see.

Poor Bertie had a hard time of it and was scared to death as well as drowned out and nearly frozen, for it was cold and raw, with a piercing dampness that went through oilers and clothing.

The next afternoon we sighted the Cape of Good Hope, a bold headland that we could see some thirty-five miles off, and hoped to make by it before dark; but the wind fell light and we still had it forward



TWO OF THE CREW

of the beam at nightfall. At midnight the wind came out dead ahead and we had to tack ship and stand off shore to clear the land.

Soon after leaving Port Natal we discovered that our kerosene was low, with just enough on hand for cabin lamps, and we had been running without sidelights. This was another of the captain's pet economies and it nearly brought us to grief, for we were almost run down by a big cargo steamer that passed us this night. She was close aboard before our sleepy lookout reported her and we had to burn a flare aft to make her sheer off. She was not a hundred feet from us as she swept past at eleven knots, the watch officer hurling anathema at us as she passed.

We were by the Cape the next day, and that ended our bad weather until we got to the Line.

From the Cape to latitude 23 S, where we picked up the S. E. trades, we had strong south winds right over our quarter and we did some of the best sailing of the passage. Running off as we were we piled sail after sail onto her until we had everything set that would draw and knocked off as much as twelve knots at times, which for a bark the size of the Lillian was some traveling. There was a heavy following sea that gave the man at the wheel all he wanted to keep her steady and prevent her broaching to and when the wheel was relieved every two hours it was a tired man that went forward.

Every one was in high spirits when we reeled off over 240 miles one day, noon to noon, followed by 250 miles the next day and 220 odd the third. This was better than steamer time—at least better than the steamers that were in the long run trade—

THE SECOND MATE AND THE STEWARD

and every one caught the spirit of the drive and responded on the jump to any order regarding the bracing of yards or trimming of sails. It was grand sailing, steady and uniform, and each day was getting us into warmer weather.

Even Bertie seemed to thrive under these conditions in spite of the amusement he afforded the foc'sle as the butt of all jokes. One day he emerged from the fore hatch on the run, bursting upon the captain and the mate on watch, covered with pitch from head to foot and his hair dripping oil. All hands were working in the lower hold, cleaning it up before our arrival at Barbados, a long and dirty job, and the men had enlivened the work at the poor lad's expense. We passed the word to lay off of him, but it did no good, for the hazing went on, and one day, when he was having his hair cut by one of the men, the acting barber cut one side close and then neglected to cut the other. All the other men refused to touch it and so for several days the poor lad went around in that condition, unspeakably grotesque. Yet he took most of it in good part, and when he was shifted from the second mate's watch to the mate's watch because he was of no use the men told him he had been promoted and he swelled with pride, believing it fully.

At this time we began to get down to short rations, or rather, I should say, to a

fixed diet of salt horse. Everything had given out, vegetables, canned stuff and all, but the barrels of salt beef—and it was salt horse for breakfast, dinner and supper, and bread. This, with tea or coffee, according to the meal, was all there was on the ship and we fared no better aft than the men forward except that we had soft bread instead of hard bread. But when for three days running the soft bread was sour, we were pretty well wrought up and were ready to murder the cook. Salt must have exuded from our skins from the amount of it we absorbed, and things got so bad that the captain and mate had a falling out over the niggardliness of the stores the former had laid in. We were homeward bound, however, and even our revolting bellies could not keep our spirits down. Lime juice was served liberally at noon to counteract the salt diet.

We ran through the fresh trades to the Line in fair time, bringing to in the Doldrums, where the wind let go entirely in latitude 4° South and longitude 34°, W. We were seven days crossing this narrow belt of about four degrees of latitude to the N. E. trades, which we picked up on May 8. We were in company with a number of ships at this time, for here all the great trade routes to the East and to South America and Africa converge, and we added to our comfort by catching lots of rain-water during the frequent squalls, and enjoyed the luxury of a fresh water bath and of washing our clothes in fresh water for a change.

On the day we crossed the Line the men determined to do something especial with poor thick-witted Bertie. They first smuggled the spy glass from the after companionway forward and had the lad looking through it all morning, trying to find the Line. Then they told him if he would buy some rum and tobacco from the captain to give to Father Neptune when he came aboard that the God of the Sea would let him cross the Line without being shaved. So Bertie went aft to where the captain was impatiently walking the alleyway of the poop deck, looking for a breeze, and boldly asked the skipper to sell him some rum and tobacco and charge it against his pay. Whereupon the captain spun round savagely and told Bertie in no mistakable terms to "get to hell forward or he would throw him overboard for his impudence."

So, the God being unappeased, about 7 o'clock that evening, after sweep down and supper, André, the Frenchman, dressed up in old clothes and with a beard of oakum to represent Neptune, climbed aboard over the bow from the bobstay, and in the growing darkness asked for the men aboard who had never crossed the Line before.

Bertie was shoved forward. Then all hands proceeded to strip him and cover him from head to foot with tar, flour from the galley and soot from the galley stove pipe—the famed Charley Noble. This was followed by each man scraping him with an iron hoop from a water barrel, not using the "razor" any too gently on his anatomy. Then they gave him a pail of grease used for slushing the mast and told him to rub the tar off with that. The poor lad did as told, and took the rough joke in good part—indeed, it was the only way he could afford to take it, though it was cruel on him when he only had about half his mental faculties.

Barbados is in about 13° of N. latitude and from the moment we picked up the N. E. trades they blew fresh, with a rough sea, and we covered the remaining part of our passage in good time, taking only five days to make the Island, which is the most easterly of the Windward group. In fact we made the longest day's run at this time that we logged during the whole voyage to Port Natal and back—namely 260 miles or at an average of 11 knots for the 24 hours, noon to noon, which beat our time in the South Atlantic by some few miles. We also logged runs of 240 and 210 miles at this time, and every one was making calculations on when we would raise the Island.

On May 13 we got the anchors over the bow, pulled the jackasses from the hawse pipes and shackled on the chain cables ready for letting go. Late that afternoon, Bertie, perhaps because his anxiety to get free from the men's teasing by making port had sharpened his eyesight, sang out—"Land-O," and every one, jumping to the rail to get the first sight of something besides water after fifty days at sea, asked eagerly, "Where away?"

There it lay, the shapely, swelling, blue hill of Barbados, standing up from the level sea floor, some 25 to 30 miles away. It was too far to make port that night, so after dark we kept the men on the move taking in royals, to'gallant staysails, mizzen gaff topsails, and all the light rags.

"A harbor furl, now, and a smooth skin" they were told as they sprang aloft. "No more of your deep water stows." And the order was carried out to the letter.

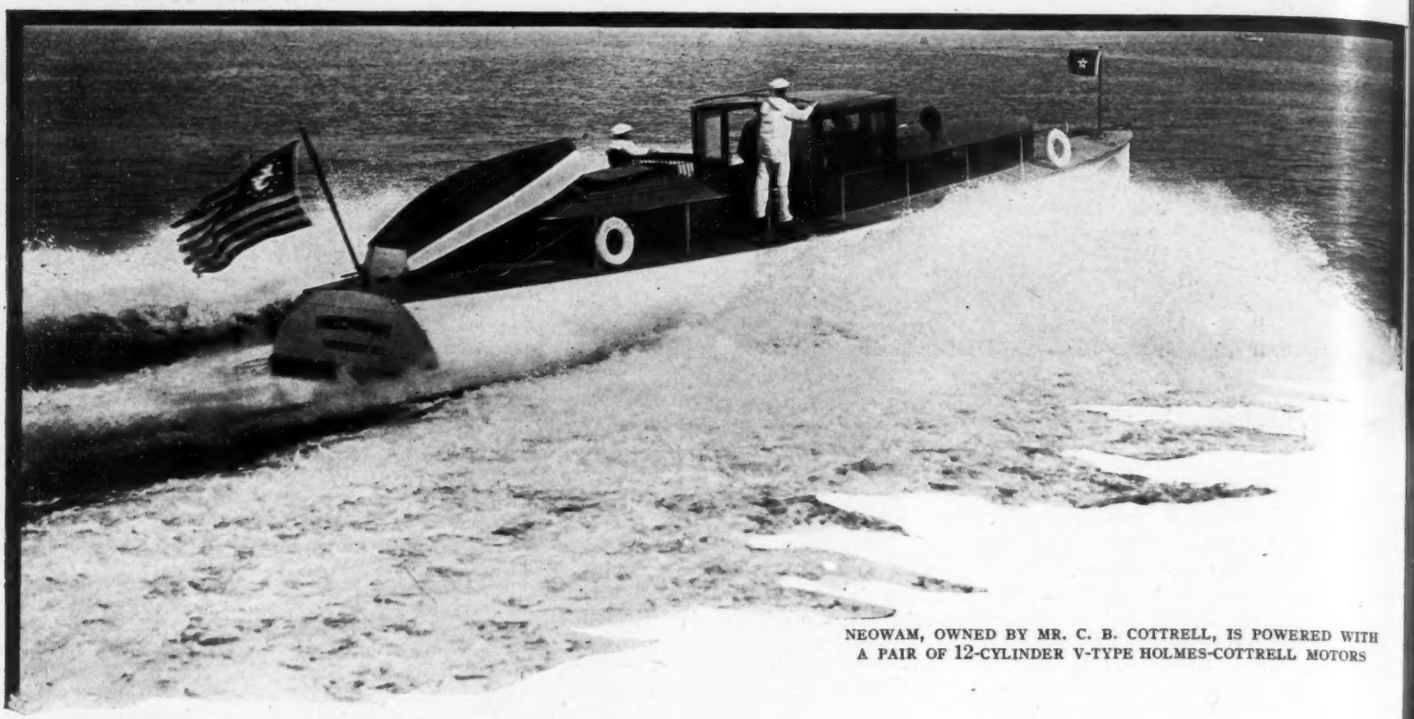
We stood off and on the Island all night under shortened sail, and burned a flare for a pilot just before dawn, so that we had one aboard by daylight.

He took the ship in while the mate kept us all busy taking in sail. We sailed into the anchorage without the aid of a tug, rounded to and backed our main yards in fine style; and when the pilot yelled, "Let go!" the mate knocked the dog free from the cathead and the hook fell with a splash while the chain rattled out of hawse pipe amid a cloud of rust as we brought up in our berth off Bridgetown.

As soon as the Health Officer and Captain of the Port had visited and passed us, the captain went ashore to see our agents and find out if there was a charter for us, and, if so, where it was from and to. We all hoped one would be waiting for us, for we were heartily tired of the ship, of each other, and, especially, of the grub. We who had homes were anxious to get back to them; those who did not have homes were anxious to get back to the allurements of the Bowery and Cherry Street and another ship when their money was gone.

After cleaning up in the afternoon I got liberty and went ashore for a real meal after six weeks of salt horse and bread. I couldn't get to a restaurant too quickly, and stopping at the Ice House Standard, near the landing stage, I ordered a meal I shall never forget as long as I live—flying fish, beefsteak, red and juicy, fried potatoes, lettuce, green and crisp, and fruits of all kinds. I literally ate till I could not walk.

(To be continued)



NEOWAM, OWNED BY MR. C. B. COTTRELL, IS POWERED WITH A PAIR OF 12-CYLINDER V-TYPE HOLMES-COTTRELL MOTORS

The Unique Power Plant of Neowam

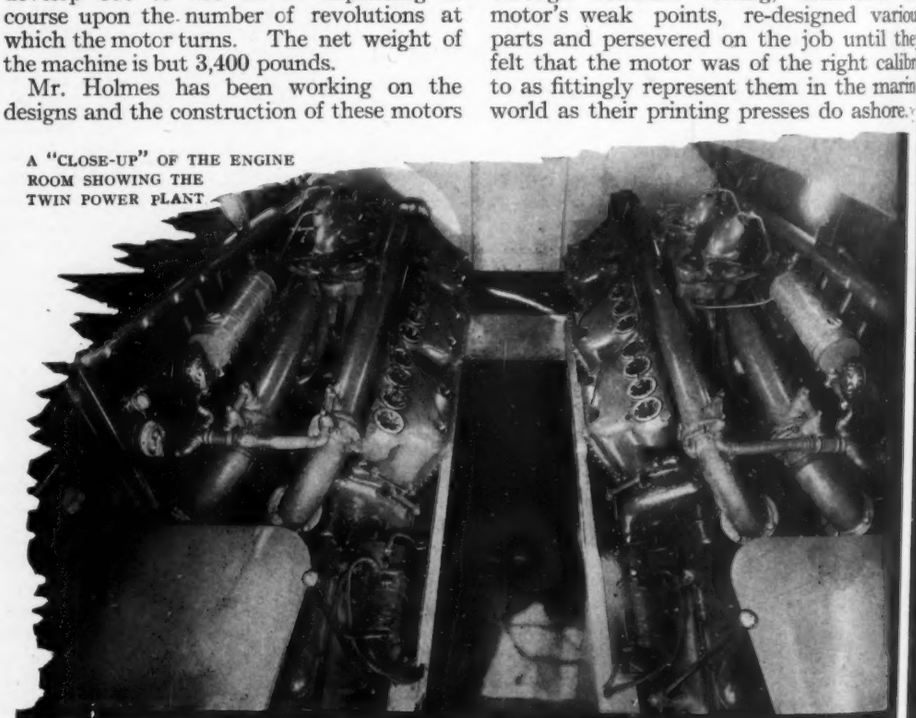
Twin Twelve Cylinder V-Type Motors Propel this Craft at a Speed of Over Forty Miles an Hour

ALTHOUGH installed in a boat not especially built for them and of a design that undoubtedly might be improved upon the two twin 12-cylinder V-type Cottrell-Holmes motors installed in Neowam propel her at remarkable speed.

The designer of the motors is Mr. C. D. Holmes, well known in the motor boating world as the creator of the well-known Holmes "getatable" motor and in these new machines he has incorporated all of the experience gained in the older 6-cylinder models. The motors are being manufactured by C. B. Cottrell & Sons Co., Westerly, R. I., manufacturers of printing presses. One of the most valuable features of the motor is the ease with which all working parts may be examined or even removed, for every part is accessible through covered hand holes through which any part may be taken without removing the motor from its base. There are no attachments along either side of the motor which gives it a very clean cut appearance, and simplicity throughout is a very striking feature. The motor is mounted on an extended base which carries not only the crank shaft but in addition the reverse gear, the fly wheel and the thrust bearings. The base also acts as an oil reservoir and is provided with circulating pumps for the distribution of the lubricant to all bearings. The cylinders are of the "L" head type and have a diameter of 6 in. while the stroke is 8¼ in. The overall length of the base is 7 ft. 8 in. and its extreme width 2 ft. 1¼ in. and the height from the entrance of the crank shaft to the top of the inlet manifolds is but 34 in. From the center of the crank shaft to the bottom of the sump is 11 in. and within these dimensions there is the energy to develop 350 to 400 H. P. depending of course upon the number of revolutions at which the motor turns. The net weight of the machine is but 3,400 pounds.

Mr. Holmes has been working on the designs and the construction of these motors during the last three years and they have been thoroughly tried out both on the testing floor and afloat and although a new product to the boat and engine buyer are not so to their manufacturers, for they have through constant testing, fathomed the motor's weak points, re-designed various parts and persevered on the job until they felt that the motor was of the right calibre to as fittingly represent them in the marine world as their printing presses do ashore.

A "CLOSE-UP" OF THE ENGINE ROOM SHOWING THE TWIN POWER PLANT



"R" Boats Have a Successful Racing Season at Marblehead

Despite the War Massachusetts Bay Saw an Interesting Series of Races Between the "R" Boats.

ROGUE IS A FAST SAILER

ON THE WIND OR OFF

DESPITE the war the yachtsmen of Massachusetts Bay held a successful racing season. Early in the year the prospect for successful racing at Marblehead seemed poor but early in July the owners of "R" boats in these waters held a meeting and voted to hold a series of eight races, and through the enthusiasm of the owners five boats started in practically every race. Of course the races were not officially recognized by any of the local organizations but the Corinthian Yacht Club took the times of the starts and finishes, laid out the courses, and issued sailing directions for the series of races.

An unusual boat made its appearance in this series. She is Rogue, owned by Mr. Charles E. Adams, of Brookline, Mass., and built by W. B. Calderwood from designs of John G. Alden, for out of eight starts she ran home a winner in six of them and has one second, and a third to her credit. In light to moderate weather she proved to be a first-class all-round performer, and seemed to have no difficulty in running away from the other boats.

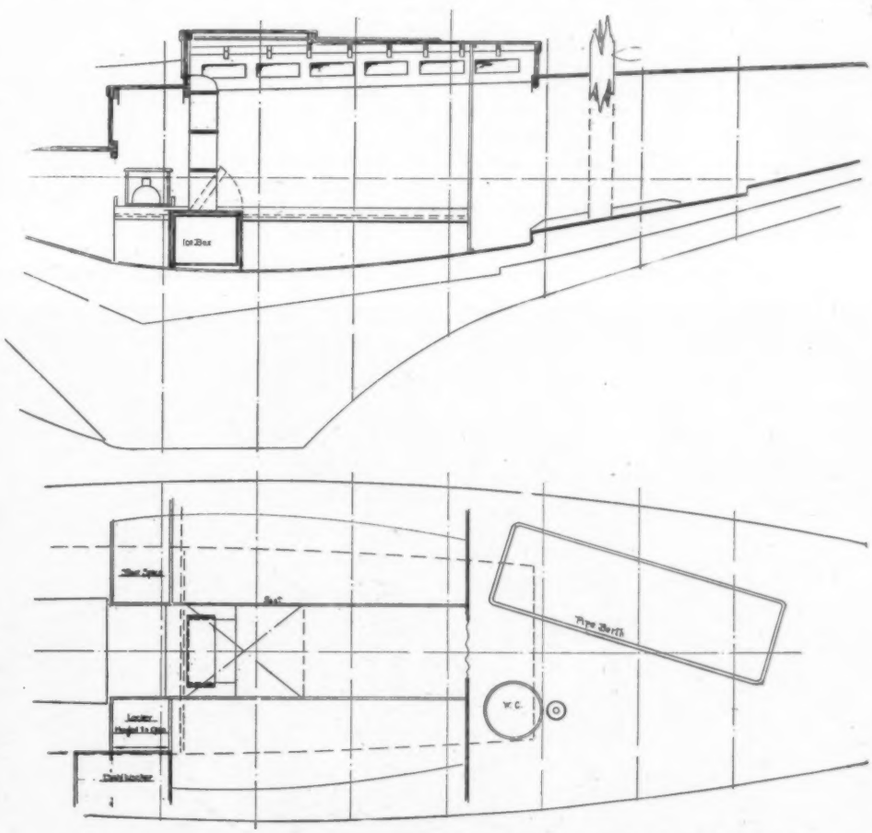
Of the two races lost by Rogue one was won by Timandra, formerly Banshee, the Lake Michigan champion of 1915-16, and now owned by Commodore J. B. Fallon, of the Corinthian Yacht Club, she having been purchased by him early in the season. Timandra is also an Alden designed craft.

Under the Massachusetts Bay percentage system the standing of the various boats is as follows (understand, though, that these percentages are not official, although they are correct:

Rogue	C. E. Adams	.925%
Timandra	J. B. Fallon	.507%
Beta	C. H. W. Foster	.478%
Huskie	J. F. Duryea	.357%
Jack Tar	H. A. Morss	.308%

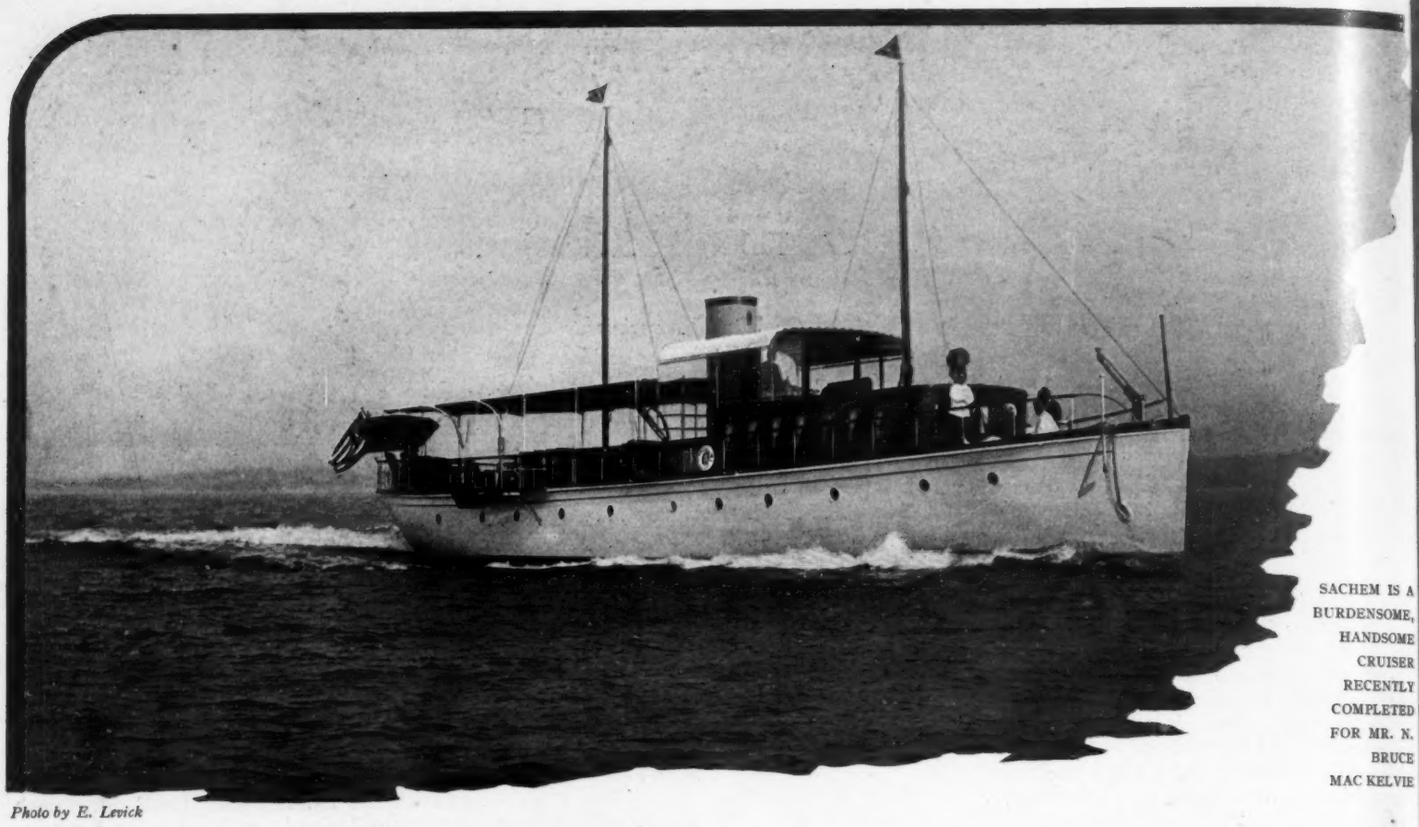
The "R" Class promises to be most popular in Massachusetts Bay next summer. The boats are small, having from 22 to 25 ft. water line length, they cost very little to run compared with either the "O" or "P" Class boats and it is not necessary to employ a paid hand.

The splendid performance of Rogue makes her especially interesting and a short description of her with drawing of her cabin arrangements seems not amiss. She is a good example, and a first class one, of the handsome able type of cruiser produced by the Universal Rule and withal has the ability to sail fast in all weathers. Her overall length is 38 feet and her waterline 25 ft. She is 7 ft. 6 in. wide and draws 5 ft. 8 in. of water and with 575 square feet of actual sail area she is very stiff and able. Below decks she has splendid accommodations for a boat of this type, having 5 ft. of head room in the after part of the cabin and separate berths for three. In the after end of the cabin under the bridge deck there are lockers, an ice box, and a two-burner oil stove. Forward of the cabin there is a large storage space to port of which a toilet is installed, while to starboard a single pipe berth is slung. There is in addition ample storage space for spare sails, ground tackle, and such other dunnage as it is necessary to have aboard a boat of this description.



THE CABIN PLAN OF ROGUE IS OF INTEREST BECAUSE IT SHOWS THE POSSIBILITY OF COMBINING A CRUISER AND A RACER

Rogue and craft of her type will help keep the sport of yachting smouldering until days of peace come. It is a brave effort these men of Massachusetts Bay have made to race their boats despite the war. So long as they cannot spend all of their time buying liberty bonds, or rushing out to enlist, or being conscripted; long as there is very definite work to be done at home; so long as the nation's extended businesses must be continued as close to their accustomed manner as is humanly possible, just so long do men need recreation, and the recreation found in sailing, in racing sailing craft, is one that makes more efficient and better men.



SACHEM IS A BURDENSOME, HANDSOME CRUISER RECENTLY COMPLETED FOR MR. N. BRUCE MAC KELVIE

Photo by E. Levick

Sachem, a Ninety-Foot Cruiser

A Winton-Engined Cruising Yacht owned by Mr. N. Bruce MacKelvie

Photos by M. ROSENFELD

THERE has recently been completed at the Matthews Boat Works, Port Clinton, Ohio, a twin-screw motor yacht for Mr. N. Bruce MacKelvie, of the New York Yacht Club, from plans prepared by Gielow & Orr, of New York. The craft has a length of 90 feet 7 inches; her length on the load waterline is 87 feet 6 inches, while her beam is 16 feet 1 inch and she has a draft of 5 feet 2 inches.

The hull is constructed in a most substantial manner; the keel, stem and sternpost being of selected white oak, while the keelsons, bilge stringers and engine keelsons are of yellow pine. The frames are of selected white oak, planed, steamed and bent to shape. The deck is white pine laid in the longest lengths obtainable. The outside planking is of yellow pine and all fastenings are of copper, composition and brass screws.

THE DINING SALOON IS IN THE DECK HOUSE FORWARD AND IS BEAUTIFULLY FURNISHED AND DECORATED

THE AFTER DECK AFFORDS UNUSUAL LOUNGING ROOM

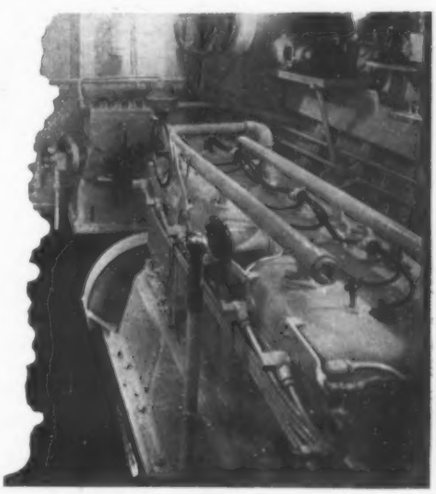
THE RAISED BRIDGE IS WIND-PROTECTED AND AWNING COVERED

SILENT TWIN WINTON

Forward, immediately abaft the collision bulkhead, is the forecastle, 8 feet in length and extending the full width of the vessel. It is arranged with lockers, transoms and berths for four men and has an adjoining toilet room. A stateroom for the captain, engineer and steward are abaft the forecastle, followed by the messroom and the galley which is fitted with an extra large refrigerator on the port side while opposite is a storeroom, dresser with sink, shelves, dish-racks, etc. The galley is fitted with an alcohol range, heater, and hot water supply, and a dumbwaiter leads up to the pantry in the after end of deckhouse. The engine room is divided from the rest of the vessel by watertight steel bulkheads, and within these are installed twin Winton motors of 6 cylinders each that propel the craft at a speed of 17 miles an hour.

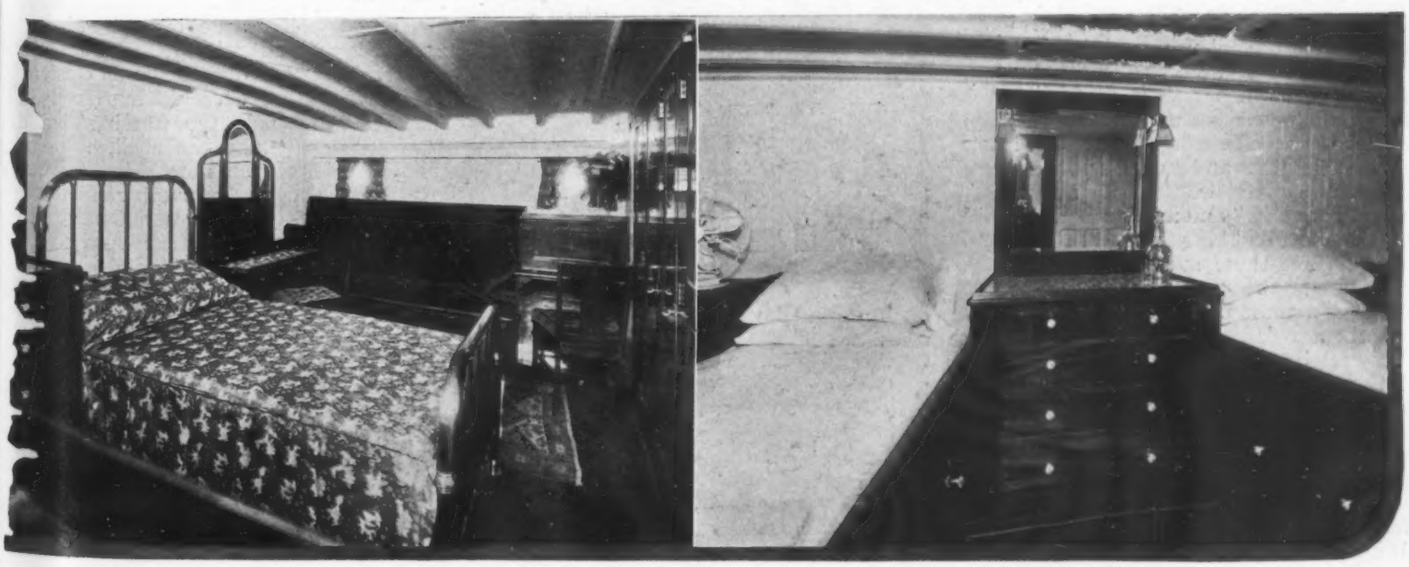
The owner's stateroom is 9 feet in length,

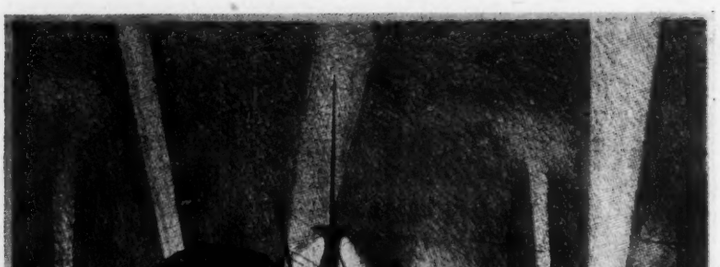
(*Concluded on page 240*)



ENGINES ARE INSTALLED

THE OWNER'S QUARTERS ARE UNUSUALLY LARGE, AND HANDSOMELY FURNISHED





Drawn by Charles Pears

THE VITAL ARTERY OF OUR NATIONAL LIFE

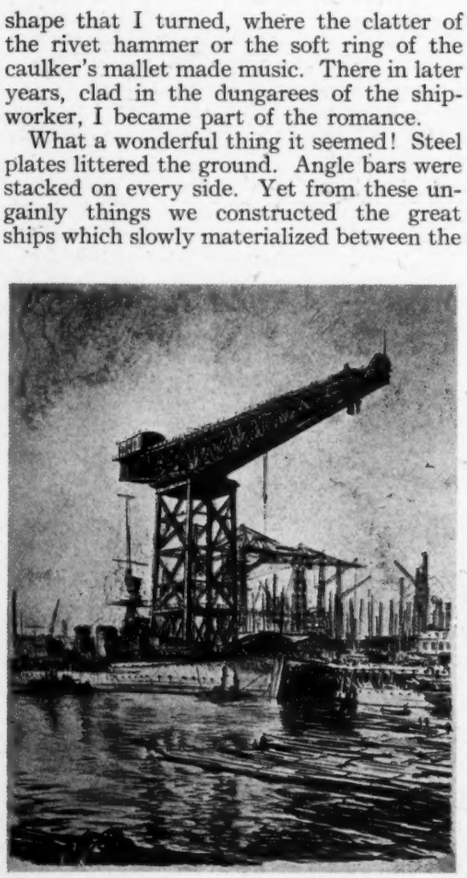
The Romance of Shipbuilding

By M. I. N. A.

By arrangement with the English *Yachting Monthly*

LONG years ago, in an age which seems to belong to another world, I gazed wistfully through the gateway of the vast shipbuilding yards which stretch for so many miles along the Clyde. Nothing fascinated me more than these huge enterprises with their rough and ready plant. It was out of bounds for us boys—*rough* men the workers were called—but by fair means or foul I managed to reach the great shears and the crushing punches. Over the timber baulks which floated in the wide pounds one could, with practice, make passage to where the tall sterns of half-plated craft stood, high, gaunt and rusty. It seemed wonderful to see great ships emerge from the wilderness of these littered yards, for these were the early days of shipbuilding, when a battle of wits was carried on between ship owner and shipbuilder, between buyer and seller. The latter put little in plant and machinery, and when that little stood idle, the wily ship owner made "enquiries" and many a builder must needs make a bad bargain to keep his steam in use. Yet these matters concerned me little. I saw the ships sail or steam to sea, to the uttermost parts of the earth; and I saw them return, with unkempt men in heavy sea boots and carrying sheath knives at their belted waists. They were of all races and colors, yet one people—seamen. And from our own circle an older lad would occasionally travel to the docks, a heavy wooden box with stout rope handles accompanying him. The sea called and they went to it—in their hundreds. But it was always to the yards where the boats took shape that I turned, where the clatter of the rivet hammer or the soft ring of the caulker's mallet made music. There in later years, clad in the dungarees of the shipworker, I became part of the romance.

What a wonderful thing it seemed! Steel plates littered the ground. Angle bars were stacked on every side. Yet from these ungainly things we constructed the great ships which slowly materialized between the staging which ran in "berths" to the sea We punched holes in the bars, and bent them into pre-arranged shapes; we marked, sheared, planed, and punched the plates as they swung in chains between the jaws of machines which drove holes-through them as if they were of cheese. We rolled them in every direction, for there is nothing flat or square in a ship's hull. And so they left us to be swung by the great cranes which stood aloft, on to the angle bars which we had previously handled, there to find a place where every hole found a fellow, where its surface bore evenly at every point—there is only one place for each plate throughout the entire hull of the biggest ship, only one place where it will fit, and there every hole and every edge must lie as close as if they were grown together. Thus bar by bar, and plate by plate the framing and the plating go to make the shell, the finely modeled hull of the new ship. Riveters, with their endless hammering fasten the work with molten rivets, to make the whole a homogenous mass of steel. And so there stands our ship at last, the work of our hands, rusty and besmirched, but tight and smooth as any bottle.



Drawn by Muirhead Bone

THE GREAT CRANES WHICH STOOD ALOFT

Surely it was romantic enough, this creation out of apparent chaos! Nor did it seem less so when chaos became an ordered system. Each plate and bar bore a number and was predestined to fit its final resting-place. The acres of plates were not alike. Of all thicknesses and sizes, some were square, some tapered; few were like their neighbors even as they lay in that unintelligible tangle. They were of different

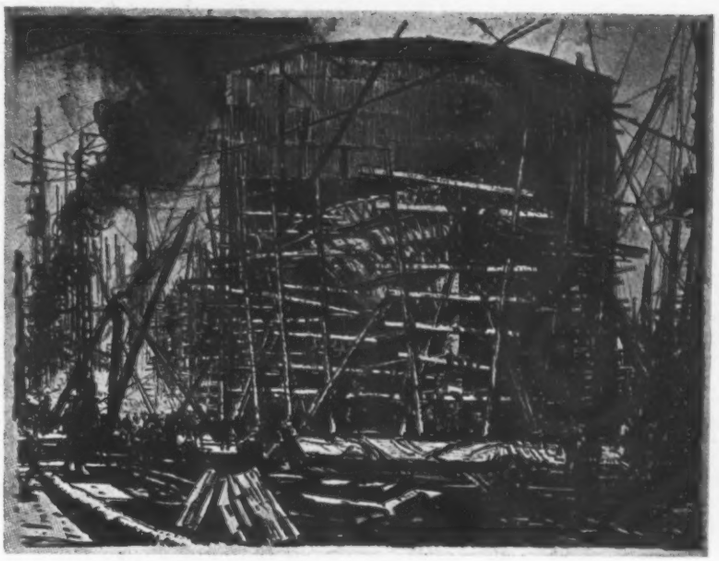
qualities, too, for the curious might find on each one hieroglyphics denoting its strength. Studious men had determined how close we might punch the holes without endangering the steel, how sharply we might bind our plate without fear of fracture. Knowledge killed none of the romance, but rather deepened it. The tangle was unraveled; everything had its place in the scheme of the naval architect, but the wonder of it all never ceased to fascinate.

So, having learned to build with steel, we turned to paper. Thereon we planned the whole from the first form of model to the smallest fitting in the furthest corner of the structure.

And thus the brain conceived what the hands fashioned, and, till the new ship had churned her way through exclusive trials, none could say that it has been accomplished well or ill.

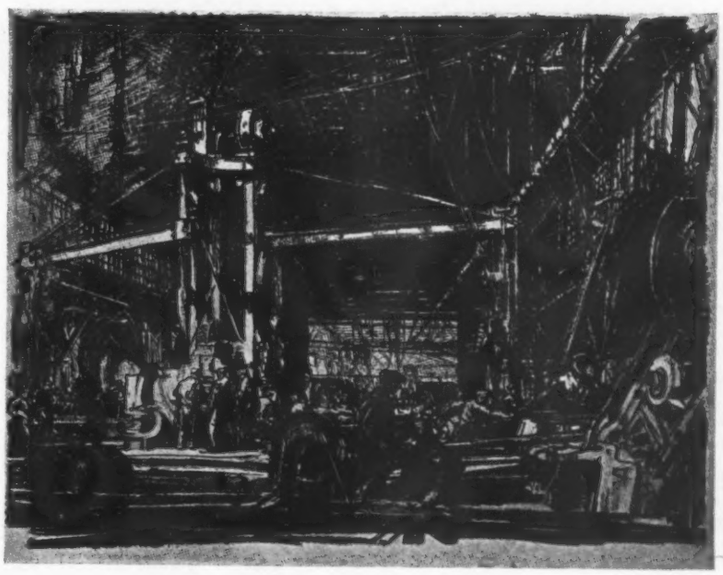
The unending decks of spacious cabins, the vast cargo holds, and the intricate equipment would be valueless had the fundamental "lines" or figures been wrongly computed. The conversion of the great ingots and incomprehensible castings into the swift working maze of the engine room would have been in vain had the myriad parts and their relationships been miscalculated.

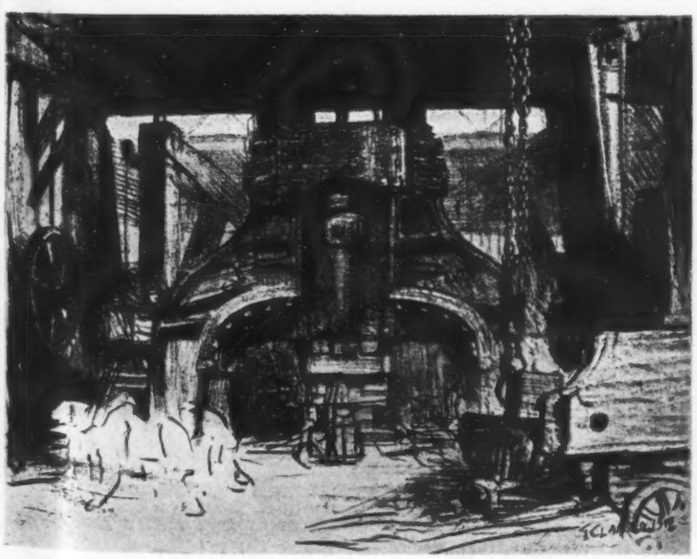
A building of wood or stone has functions to perform, but what are they compared to those of the ship, which must generate the steam her engines require to turn her propeller at such a rate as will give a given speed in the roughest sea without endangering her structure or the comfort of all on board. A ship must be strong, yet she must yield at times to abnormal stress,



GREAT SHIPS SLOWLY MATERIALIZED BETWEEN THE STAGING

Drawn by Muirhead Bone





THE GREAT SHEARS AND CRUSHING PUNCHES

Drawn by Muirhead Bone

THE CONVERSION OF THE GREAT INGOTS

Drawn by George Clausen, R. A.

and the engines must provide power, light, ventilation, loading and unloading equipment, not to speak of innumerable other necessities. And to make it all from these plates, bars, and chunks of steel!

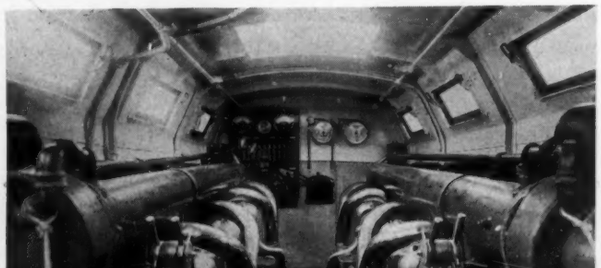
Many a time have I sat and marveled at the wonder of it all. When the pulley belts ceased to creak, and the deafening uproar was replaced by a sudden quiet which almost hurt the senses, the marvel gripped one by the throat. And in Bond Street, London, of all places in the world, it came back to me. There, in the Fine Art Society's Galleries are shown the work of eighteen artists who have depicted "Britain's Efforts and Ideals in the Great War." Shipbuilding is one of these efforts, for we stand to-day face to face with the essentials of national life. We live upon an island, but we work so much for others that we cannot spare the time to grow and cultivate our food. So our enemies would starve us by concentrating on the destruction of the vital artery of our national life—our ships. Vigilant sentries combat these efforts under the seas, but the ship which is destroyed in fifteen minutes may take as many months to build. Fortunate it is for humanity that we hold another weapon of defence. The great yards of our northern rivers grow busier, ever busier. Day and night the hum of machinery mingles with the rattle of deftly wielded hammers; long trains of trucks bring those interminable plates and angle bars for the waiting hands to mould and weld them into ships. There never was a time when we could more fully appreciate the Romance of Shipbuilding.

ONE OF THE NOTEWORTHY BOATS OF 1917 IS INQUIRER, OWNED BY COL. JAMES ELVERSON, OF PHILADELPHIA

Inquirer, a Naval Scout Boat

DESIGNED to conform with the present naval style, Inquirer is businesslike in appearance, unusually strong in construction and a remarkable sea boat. She was designed by A. Loring Swasey and built by the Mathis Yacht Building Co., of Camden, N. J., for Col. James Elverson, of Philadelphia and New York. The craft's overall length is 62 ft. and her beam is 11 ft. 6 in., while her draft is 3 ft. 9 in.

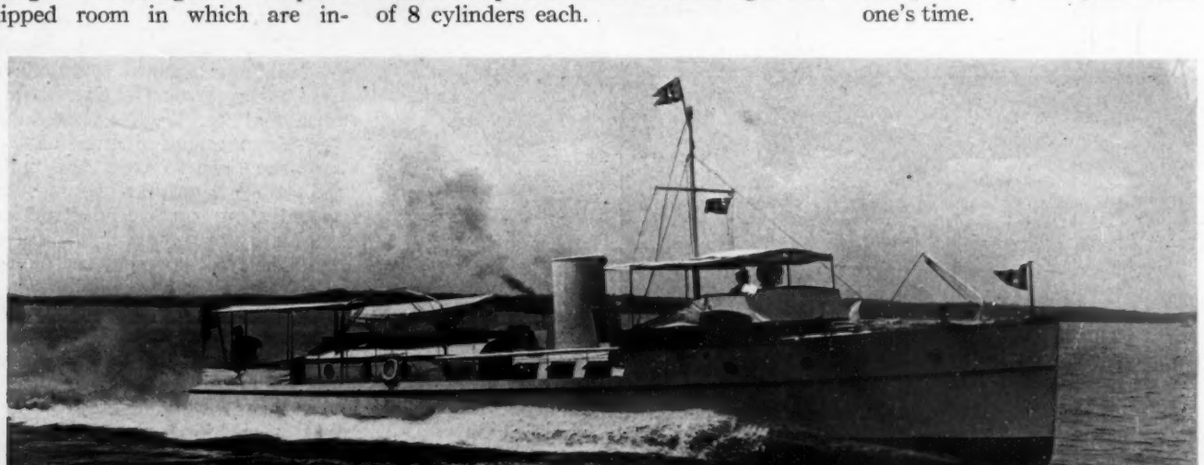
Her accommodations below decks are unusually large and consist of crew's quarters under the raised deck forward, followed by a very comfortable and commodious bridge deck from whence the entire craft, and power plant in addition, is controlled. The engine room is abaft the bridge deck, it being a well designed and splendidly equipped room in which are installed two patrol model Duesenberg motors of 8 cylinders each.



TWIN 8-CYLINDER DUESENBERG MOTORS PROPEL INQUIRER AT A HIGH RATE OF SPEED

The owner's accommodations are under the trunk cabin aft. They consist of combined owner's stateroom and main saloon, forming in many ways one of the most handsomely furnished cabins yet devised. There is an adjoining toilet and bath room, fitted with shower on one side and a large and splendidly equipped galley on the other. Every piece of furniture and every fixture in the owner's quarters fall in with the general plan of decoration and it is a delightful sight for the eyes and a mighty comfortable sensation to the body to be able to spend a few moments in the main saloon of Colonel Elverson's Inquirer.

There is a large cockpit in the after part of the boat luxuriously furnished with heavily upholstered chairs and seats, a truly delightful place to spend one's time.



INSIDE AND OUT INQUIRER IS FINISHED AND FURNISHED LUXURIOUSLY. SHE IS PROBABLY ONE OF THE MOST EXPENSIVELY EQUIPPED EXPRESS CRUISERS SO FAR BUILT

IRENE, OWNED BY MR. A. W. MIDDLETON, WAS THE WINNER OF THE FIFTY-MILE OCEAN RACE HELD UNDER THE AUSPICES OF THE TAMAQUA YACHT CLUB

The Tamaqua Yacht Club Race

The Ocean Race Recently Held by the Tamaqua Yacht Club was a Success in Every Way and Brought Out Nine Starters

By W. J. THOMAS

A SPECIAL race under the auspices of the Tamaqua Yacht Club, of Sheepshead Bay, N. Y., was held on Sunday, September 30, and proved to be one of the most interesting contests ever run in these waters.

The race was over a course of fifty nautical miles and for a cup presented by Mr. Arthur A. Middleton, and several other trophies as follows:—Osborne House Cup, presented by Mr. T. Evens; the Dominick Olagner Cup, presented by Mr. Dominick Olagner and the Tamaqua Cup, presented by the club. The race was open to cabin cruisers of not less than thirty feet and not exceeding fifty-five feet over all, and owned by enrolled members of regularly organized yacht clubs in Greater New York. All boats were rated under the American Power Boat Association rules for 1917.

The course was from a committee boat off Manhattan Beach to a stake boat off Rockaway Point, thence to buoy No. 2 off Long Beach, then a turn past Ambrose Channel Lightship to Scotland Lightship and return to the committee boat.

The starting gun at twenty minutes past ten was a signal not only for the yachtsmen but also for Old "Jup. Pluv.," who not only opened his own but many other "dams." However, later the rain ceased and the skies cleared as the nine entrants rounded the stake boat abreast of one another, and so continued for more than half of the outward leg.

The Weather Man was busier than usual, for on the return journey a stiff breeze came out of the west and from then on to the finish all hands became seamen instead of yachtsmen. In this mess some of the craft dove into, while others seemed to skip across the big ones, while others rolled.

Just as the wind was at its strongest Commodore Haslinger's cruiser, Kodak, lost her rudder. Many yachtsmen would have lost their heads along with the rudder, but able seaman Haslinger calmly ripped up a board from the cabin floor, took the handle out of a mop, drove in a few nails, cussed a little, placed his improvised rudder and dauntlessly finished the race.

The Kee-way-din led the procession, followed by Commodore Child's Bluebird, then came Mr. W. T. Wheeler's Tec. and Mr. Arthur Middleton's Grace Irene, which subsequently won the race.

Following is the summary:—

The boats finished in the following order: Grace Irene, owner, A. W. Middleton; Kee-way-din, owner, R. S. Snyder; Blue Bird, H. E. Childs; Tec, W. T. Wheeler; Comrade, W. A. Irwin; Typhoon, A. Gieser; Glean, C. A. Crocker; Bessie F., M. Friedberg; Kodak, R. J. Haslinger. The committee presiding over the race consisted of Messrs. Samuel Neill, E. A. Gartner, W. H. Critchley, assisted by Messrs. C. H. Green, C. A. Merritt.

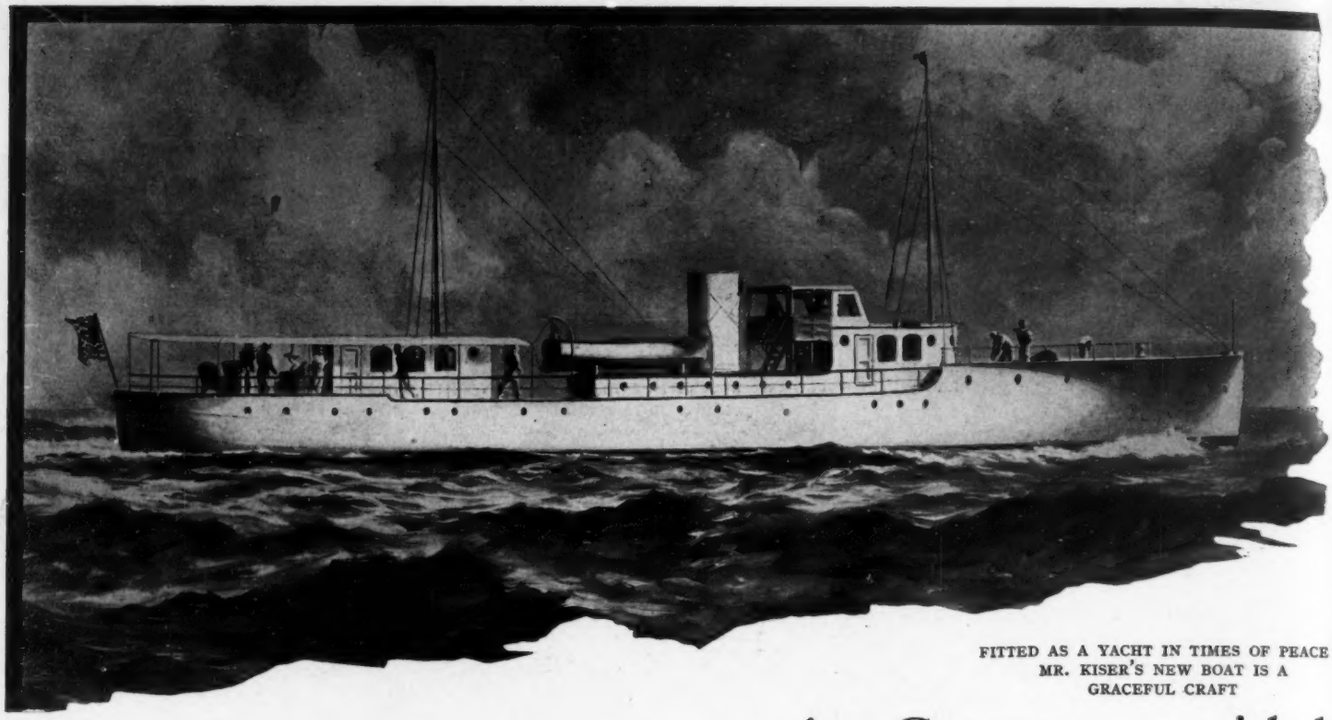
THE CLUB HOUSE OF THE TAMAQUA YACHT CLUB IS ON THE CORNER OF EMMONS AVENUE AND EAST 19TH STREET, SHEEPSHEAD BAY

The Tamaqua Yacht Club's Regatta Committee is composed of Commodore Childs, Samuel B. Neill, Chairman; Edward A. Gartner, Secretary; William Critchley and Al. Ferber.

The Tamaqua Yacht Club is an outgrowth of the old Aeolus Yacht Club, organized in 1885 with Alanson Treadwell as commodore and A. S. Folk as secretary. In 1912 it was incorporated into the Tamaqua Yacht Club with James F. Keegan as commodore and George MacArthur as secretary. Several times the club has had to move into larger quarters to accommodate its growing membership until they secured the present club-house at the corner of Emmons Ave., and East 19th St., Sheepshead Bay.

The Club has a mooring basin which accommodates 150 boats and has 35 feet of water. It is landlocked on three sides with only the rise and fall of the tide to disturb the boats.

The officers of the Tamaqua Yacht Club are as follows:—Commodore, Harry C. Childs; Vice Commodore, Edward A. Gartner; Rear Commodore, T. V. Gould; Fleet Captain, W. H. Critchley; Ensign, George W. Schultz, Recording Secretary; Walter H. Hume, Financial Secretary; George Macdonald, Treasurer. Board of Governors: J. A. Filsner, W. T. Anderson, J. Ford, W. H. Critchley, William E. Bond and A. G. Ball.



FITTED AS A YACHT IN TIMES OF PEACE MR. KISER'S NEW BOAT IS A GRACEFUL CRAFT

A Convertible

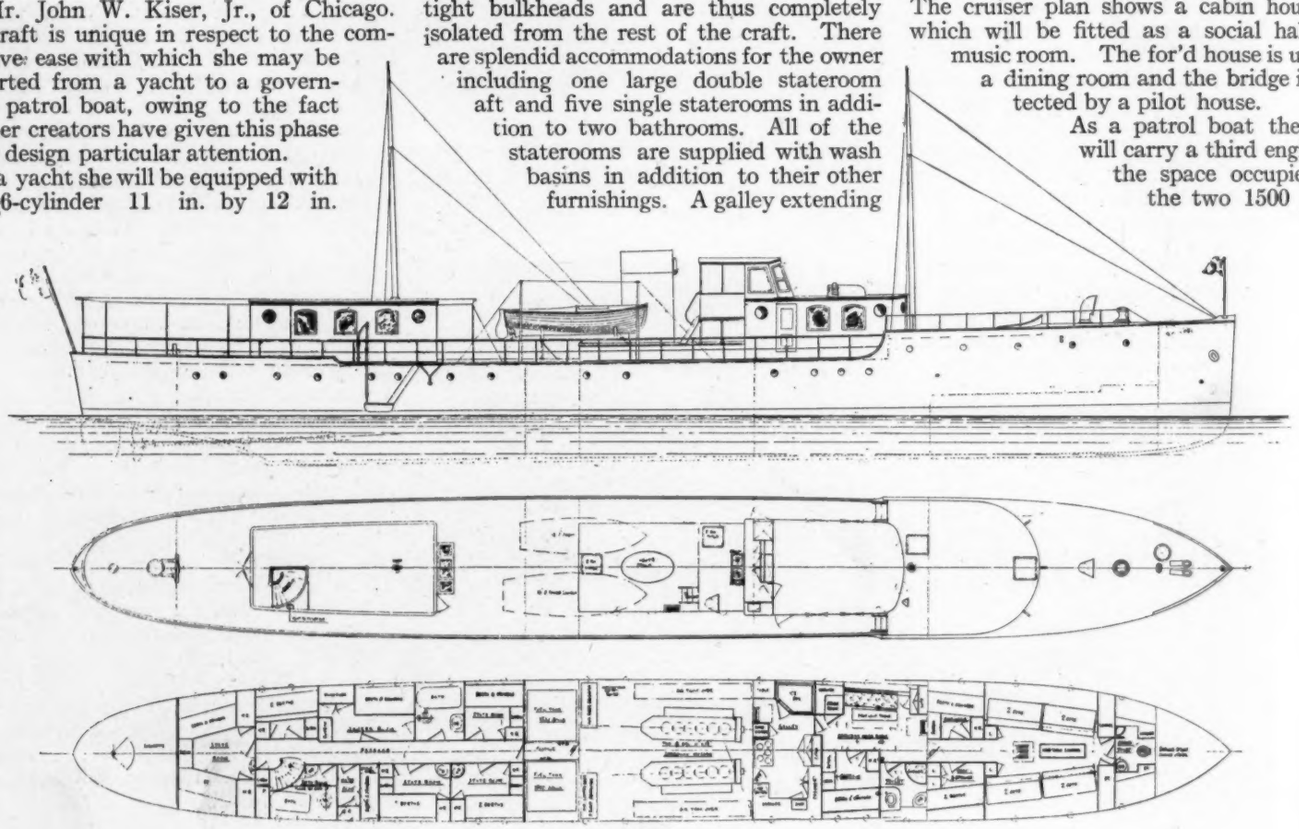
A New Boat of Unique Design Adaptable

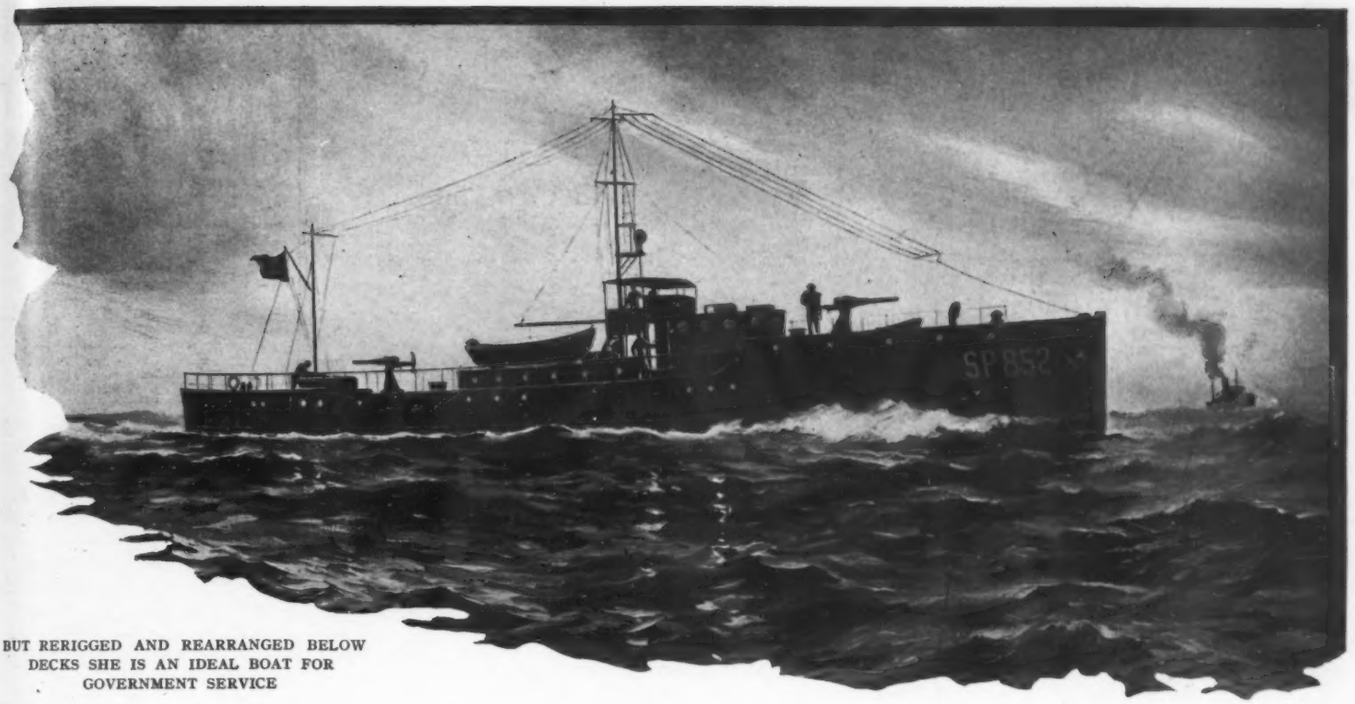
Illustrations by

A BOAT of much interest in these warlike times is the cruiser now under construction at the yard of the Gas Engine and Power Co. and C. L. Seabury Consd. for Mr. John W. Kiser, Jr., of Chicago. The craft is unique in respect to the comparative ease with which she may be converted from a yacht to a government patrol boat, owing to the fact that her creators have given this phase of her design particular attention.

As a yacht she will be equipped with two 6-cylinder 11 in. by 12 in. Speedway gasolene motors and a gasolene capacity of 3,000 gallons, which is sufficient for a wide cruising radius. The motor room and gasolene tanks are installed within watertight bulkheads and are thus completely isolated from the rest of the craft. There are splendid accommodations for the owner including one large double stateroom aft and five single staterooms in addition to two bathrooms. All of the staterooms are supplied with wash basins in addition to their other furnishings. A galley extending the full width of the vessel, a mess room for the officers and staterooms for the captain, engineer and steward, with adjoining bath room and the crew's quarters are forward. The cruiser plan shows a cabin house aft which will be fitted as a social hall and music room. The for'd house is used as a dining room and the bridge is protected by a pilot house.

As a patrol boat the craft will carry a third engine in the space occupied by the two 1500 gallon





BUT RERIGGED AND REARRANGED BELOW DECKS SHE IS AN IDEAL BOAT FOR GOVERNMENT SERVICE

Motor Craft

Either as a Pleasure Yacht or Naval Vessel

Frank Paulus

gasolene tanks. This will give sufficient power to propel the boat at a speed of sufficient velocity to make her of real service as a naval vessel. Slow boats nowadays are of little use to the Navy Department, especially boats of this character.

Fresh water tanks, a large gasolene tank and ammunition room are abaft the third engine and abaft these are the officers' quarters comprising three single staterooms and a double stateroom, in addition to the bathroom.

The fore part of the vessel is given up to the crew and galley. There are separate quarters for petty officers with adjoining bathroom and berth room for twelve men with lockers and all the necessary furnishings to properly house them.

The deck arrangement of the craft as a patrol boat shows the chart house forward in which also is arranged the officers' mess room just as it is in the yacht lay out. The bridge pilot house is discarded and there is a stout military mast abaft the bridge fitted with a crow's nest and searchlight. A shorter mast forms a stanchion for the wireless antennæ. On deck the space allotted to the music room has a six-pounder rapid firing gun mounted and access to the officers' quarters below is accomplished through a low companion house. A second six-pounder is mounted

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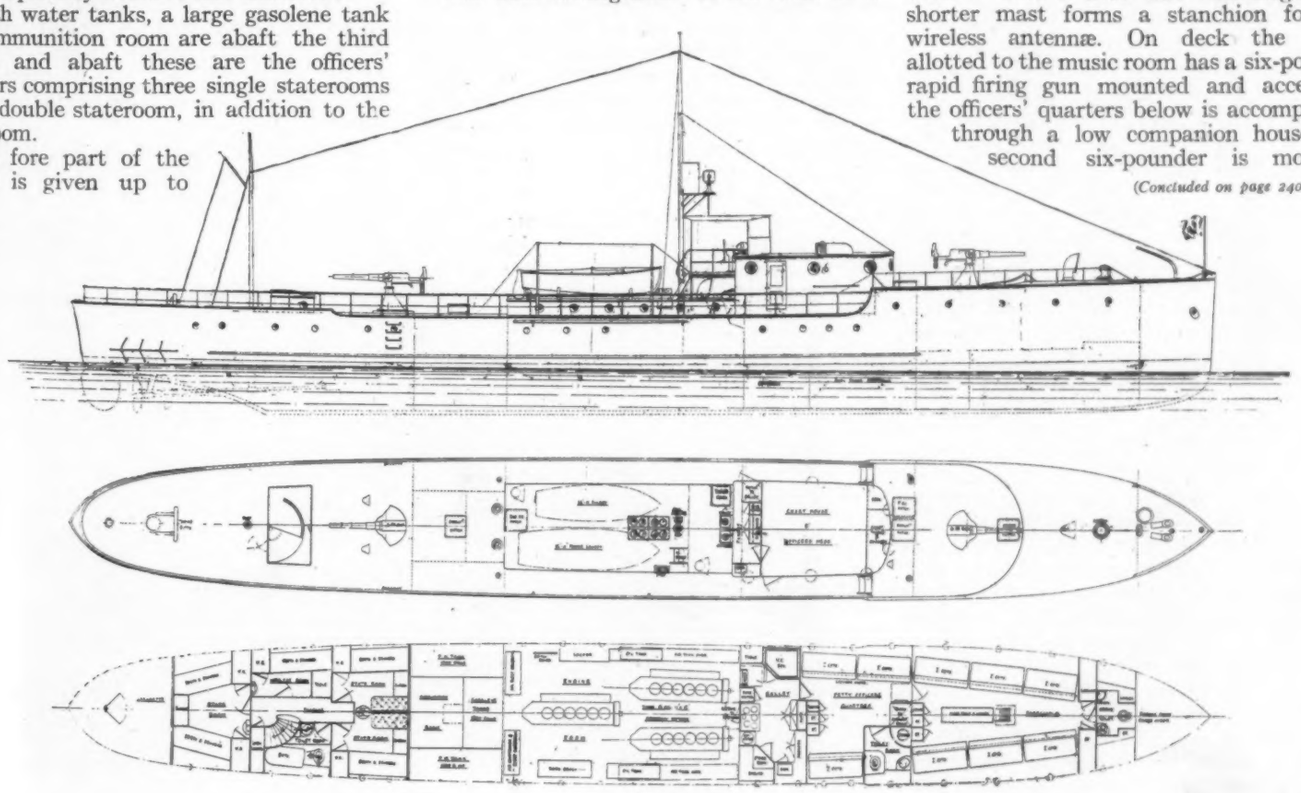
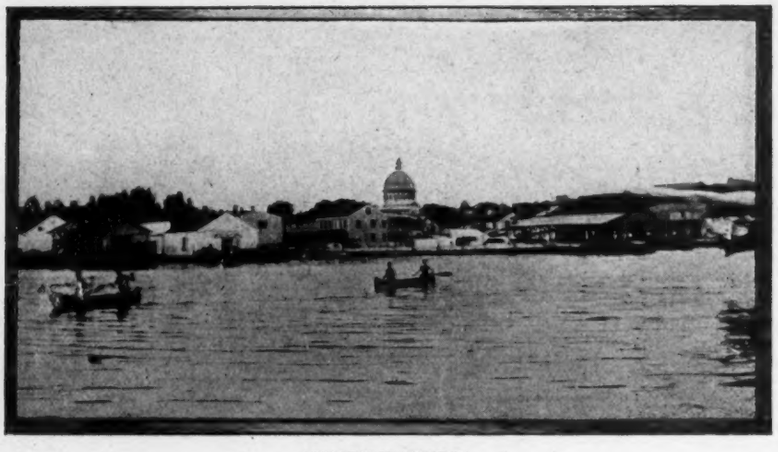




ANNAPOLIS HARBOR

Shipmates Four

A Chesapeake Bay Cruise

By Capt. T. C. MORRIS

ONE balmy evening in August—the fifth to be exact, a close observer might have perceived the Skipper sitting in his "Dayton" wagon impatiently awaiting the train at the Easton station, and cursing bitterly at the road and all its connections; said curses, because as usual, the train was late. When it finally arrived, the tired locomotive gasping after its rapid (?) flight, the dusty coaches disgorged the Mate with hand baggage, followed by the two Fair ones, without whom life afloat would be a disappointing blank.

The Skipper did his duty as reception committee, and baggage being loaded, the Mate somehow tucked his breadth away on the trunks and the outfit departed, everyone talking together as discipline was for once relaxed. Home was reached in due time and the tired travellers were soon wooing sweet dreams. The following days were occupied in getting things on board the Cora, and in search of the box of "eats" which had not turned up.

On Wednesday the 10th, sail was made at 2.30 p. m. as we were bound for St. Michaels to pick up ice and other necessities. The weather was very threatening, and a heavy squall of wind and rain just missed us as we ran down the river. Arrived in the harbor at 4.00 p. m., the Skipper having a hunch, wanted to anchor clear of the wharves, but the Mate being leary of extra rowing, insisted upon going close in.

Having anchored and rolled up the canvas, the Mate rowed the Fair ones ashore where they went to market. Soon after their return, a power yacht from Cape May came in and anchored close alongside, very close indeed, and shortly another dropped her hook close ahead of us; this with the whole harbor in which to choose a berth. The crew of the first boat was quite gay—not to say fresh—and showed considerable curiosity in trying to size up our Fair ones, so after dinner the Skipper hailed a friend's launch which came alongside and took a line, towing us out to a more secluded berth. The Skipper having explained to his friend that we wanted to move because we didn't like to be crowded, in the hearing of the aforesaid fresh ones, they revenged themselves by singing:

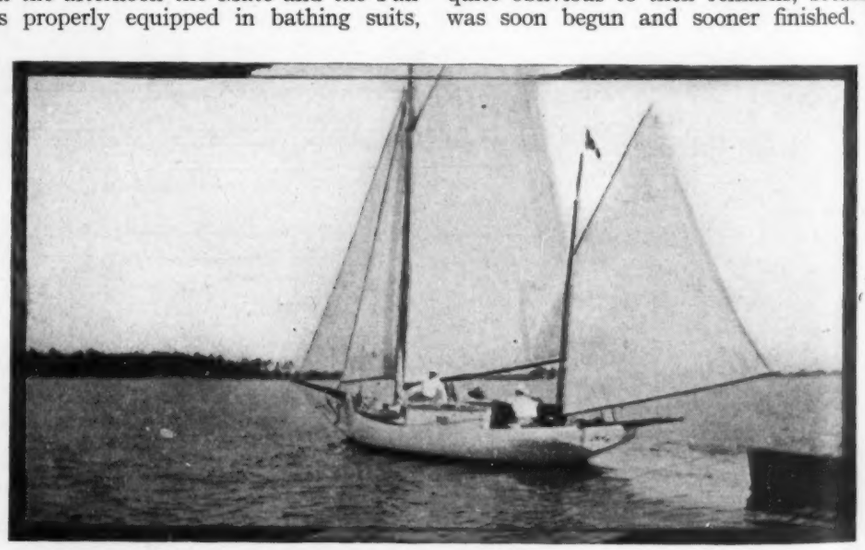
"In the light of the moon
They love to spoon—
The people we drove away!"

That night it rained heavily and persistently, but we were in a snug harbor, so who cared? The following morning several trips were made ashore by the various members of the party, the last one being for that needful article on a yacht, ice. Then up anchor and away for the lovely Wye river. We had a fine sail over and at eight bells the usual ceremony was observed, also, when coming to anchor off the Fletcher's place.

In the afternoon the Mate and the Fair ones properly equipped in bathing suits, went on a hunt for a sand beach, so as to take a bath. The only one in sight was on the Fletcher's shore, but they boldly landed and were enjoying themselves, when the family's launch full of people, young and otherwise, appeared. The Mate tried to throw the bluff that they had casually fallen overboard, but we don't think they fell for it, however, they afterwards came alongside and invited the party ashore.

Meantime the Skipper was struggling with a chicken of uncertain age in the galley, and remained discreetly out of sight. That night was lovely, cool and bright; all hands sat on deck under the big awning, the Mate in his usual position, the Skipper tipped back against the starboard main runner falls.

Washing decks next morning brought forth the usual storm of reproaches for waking the sluggards in their berths, but quite oblivious to their remarks, breakfast was soon begun and sooner finished. En



WE TOOK A VIEW OF OUR SHIP, CORA, OFF SECOND POINT, MILES RIVER, MD.

passant, it was really remarkable how very little was left over after each meal, it seemed to be a point of honor to most thoroughly "clean up" everything edible. Towards 9 o'clock anchor was weighed and we proceeded down the river, ostensibly bound for Annapolis, but on reaching Bennett's point, the sight of the white sand beach proved too tempting, so anchor was dropped and sails lowered.

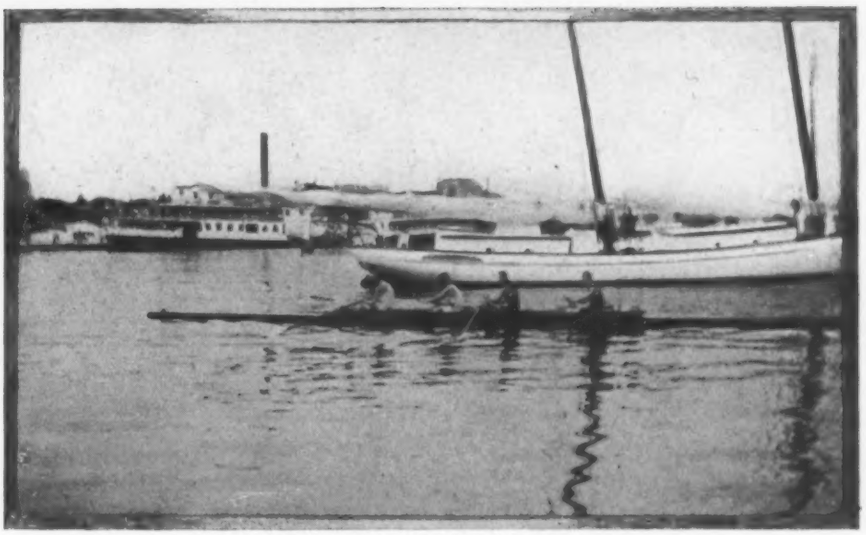
Then the Fair ones and Mate got into bathing suits, and went for a prowl around the shore. The Skipper, having no fancy for either cut feet or sunburnt shoulders, firmly declined to make a fourth and remained on board. The twenty minutes the exploring party was to have been away, lengthened into two hours or more before it returned, and meantime a raging calm had fallen on the waters, and very sunburnt the party looked and doubtless felt; at least there was something doing with witch hazel and cold cream. To allay the inspired thirst, long cold drinks were called for and put where they would do most good; then luncheon, followed by a general assault on the crabs swimming by, and many a honeymoon journey was interrupted. There was no necessity for using bait; they swam past in such quantities that several dozen were soon on board and being cooked. Then the Mate decided to go fishing.

This was not the first time he'd tried it, by the way, nor the last, but the result was always the same; he would carefully get his cane angler out of the rigging, pick out a crab or two that he fondly hoped might be a "peeler," row off to some spot where he imagined the fish were feeding and go to it in all earnestness. No failures seemed to discourage him, and he turned a deaf ear to the ribald remarks that were flung at him for his soul's good from time to time. Happy youth! Hope springs eternal in thy breast!

Having decided not to go any further this day, for obvious reasons, the sails were rolled up, awning spread, and dinner served, a most pleasant feature being a delicious crab salad, the crabs being steamed in vinegar, the only way to steam them, by the by. This day was without rain, and ended by the usual evening on deck in the moonlight.

The day following being Saturday, an early start was made, with the wind Northeast, for Annapolis, leaving the anchorage at 7.25 a. m. The Cora passed through the swash channel under all sail except spinnaker, and that was added as Tilghman's point was turned, then a lovely run down Eastern bay to Kent point, where, as it looked a bit squally, the light sails were taken in, but the old ship ran along smoothly enough, meeting the yachts Chenodin and Freelance bound down.

Annapolis was reached at 1.45 and we saluted the burgee at the station of the Capitol Yacht Club, as we let the anchor go. Then the Fair ones went to market, while the Mate and Skipper put the ship away. A fine dinner of fresh vegetables and chicken



THE POLICE BOAT, MAY BROWN, ANNAPOLIS, MD.

disposed of, arrangements for a bad night were made, as the clouds were very ugly, and sure enough the rain soon fell in torrents.

The cabin developed unexpected leaks, and basins and everything that would hold water were sitting around. The Skipper became very uneasy, and putting on his bathing suit, went on deck to get the second anchor clear; the chain cable however, refused to come through the pipe, so the Mate was instructed to crawl up in the locker and see what the—! —! ailed it. He remarked it "was too dark to see," but the Skipper's commands "to light a match for the sake of Pete," are said to have been heard for quite a distance. We cannot believe this, however as the Skipper is a very mild-mannered person. It was however, a nasty night, but finally wore away.

On Sunday morning sails were opened to dry, and the Skipper saw a friend aboard the yacht Omoo, who seemed to be living in dignified seclusion, a Mr. H. L. Street, commonly known as the "Slave," and the yacht was awaiting her owner's return from Philadelphia. The Slave was induced to come aboard to lunch, and to make a favorable impression, the resources of the Cora as well as the minds of the Maiden and the Skipper were taxed to the limit, while the Mate and Chaperon entertained the guest on deck.

This was the time when one who shall be nameless attempted to make iced tea from *cold* water—over his misdirected efforts let us draw a veil. The Slave was so rattled by his reception that he invited the party to dine on board Omoo, and called the Fair one's bluff by putting real silver on the table. We suspect, however that he counted the pieces before and after.

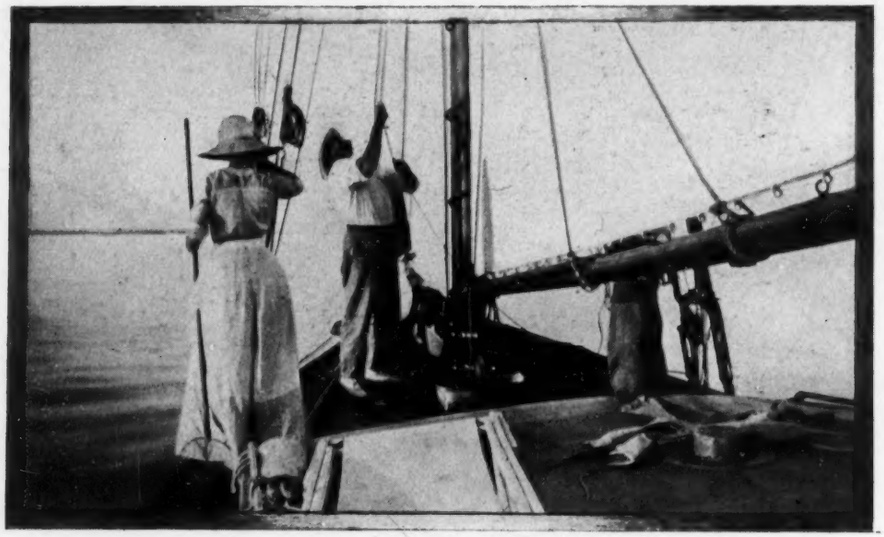
That night it rained again most hilariously and kept it up steadily, but we slept—between the showers; at other times we were very busily employed trying to catch part of the water that found its way through sundry unexpected leaks. Has any one ever seen a cabin that wouldn't develop leaks at times?

On Monday the Fair ones announced their intention of going to Washington for the day, so arrayed in all their finery they departed in a drizzle of rain. Then the two deserted ones consoled themselves by a stroll ashore, and a visit to the Mess, but as none of the officers there were known to either of them, they were "stung" and repaired on board in the afternoon, wondering when the interesting half of the party would return, and got the surprise of their lives for the Fair ones had come back and were found on board.

They claimed to have had a real hurrah time, but in the masculine minds there lingered a suspicion that they also had been stung! The Omoo man blew in shortly, and again summoned the party to dinner, and after a proper amount of hesitation the bid was accepted, but this time his silver did not appear, so it is to be presumed he was afraid to risk it twice. More rain but not so heavy, and later in the night.

Tuesday the weather was still thick, and the wind was continuing its stunt, blowing very fresh from N. E., so all hopes of going up the bay were abandoned, as it was thought to be too rough for comfort. All puttered about during the day, and in the afternoon, the Mate borrowed Pud, the Omoo's tender, and rowed the Fair ones up Spa creek.

It was ascertained that the owner of Omoo was expected on the evening train. Now he, being a very shy and retiring young bachelor, certain persons conceived the idea of putting up a job on him. Accordingly, the Omoo was carefully watched, and when the Slave was seen to go ashore to meet his friend, a messenger was despatched to Omoo, with a few hairpins and a bottle of talcum powder; the former were put on the berth and the powder sifted on the pillow. The conspirators then awaited



THE CHAPERONE WATCHING FOR CRABS

the outcome with bated breaths, but had to imagine what happened, as no visible demonstration took place, but we imagine the unfortunate Slave had a busy quarter of an hour.

Wednesday morning brought little or no change in the weather, so it was agreed we sail somewhere, one reason being that the Mate had no possible excuse for fishing in the harbor, so after lunch reefs were tied in. and preparations made to start. The captain of the May Brown, an oyster police schooner lying next to us, ruffled the Skipper's temper by asking if we thought we could get under way without fouling his vessel. Oh, these farmer sailors! So just to show them the Cora was filled away from the anchor and taken out through the fleet under a rap full. Then began a fine sail, one of the best on the trip.

When off Greenbury point light-house, a second reef was put in the mainsail, as it was seen to be pretty rough outside. While reefing, a large steam yacht passed close, also bound down; she rolled very much in the beam sea, and a couple of ladies on the deck were trying to take pictures of us. We plunged a good bit and were carrying double reefed mainsail, reefed mizzen and staysail, and spitfire jib. As we opened Eastern bay a squall struck us, both wind and rain, but it was seen coming; staysail taken in and the yacht luffed into it.

We soon reset the staysail and tore across Eastern bay, intending to go into Ferry cove. We saw a very large ketch at anchor in the middle of the bay, and everybody wondered why she was there, but as there were no signals or flags of any kind showing, we did not think it would pay to beat up a couple of miles to investigate, so kept on.

The channel into the Cove is narrow, but the Skipper had the marks, and ranges, and anchored near the steamboat wharf out of the way of everything. Ferry cove is one of the most sheltered harbors on the bay, but as seven feet is the best water even in the channel, it can only be used by small boats.

Everything on deck was wet except the crew, which was exceedingly dry, so this latter condition having been corrected, dinner was cooked and, as usual, thoroughly enjoyed. The Mate having an eye to possible fishing, turned out early next morning and went ashore, trying to get one of his everlasting "peelers." There were generally two or three hard crabs crawling around the deck, so everyone had a natural disinclination against walking about barefoot after dark.

We succeeded in getting started at 7.45 next morning for Oxford, but the wind was light, and when near the light-house, a violent calm fell. Here we lunched, and the Maiden attempted to describe the rig of a vessel we had outsailed. Her efforts were really pitiful, and after trying everything she knew, she gave it up. The vessel was a bugeye, if you must know.

Arriving at Oxford at 2 o'clock, the Fair ones arrayed in all their glory were rowed ashore by the Mate. They were gone some hours, as it seemed to the Skipper—strange how lonely a man gets, isn't it? But fortunately a friend or two happened along on a launch, and visited him, thus cutting down the long afternoon. When they arrived, dinner was prepared and disposed of, and then the Cora was moved over to Plain-dealing creek and anchored off the Woodall's place, where we went ashore and spent the evening.

Friday morning an early start was made, as we intended trying to get home, stopping at Oxford on the way, partly for ice, and partly to enable the Mate to inquire the whereabouts of the mystical fish which he still hoped to catch. Left at 9 o'clock with a very fresh North wind, and on getting into the Choptank, found it quite rough. We were under reefed mainsail and staysail and that was often more than enough.

As we neared the mouth of the river the sea was so high that there was not much comfort aboard, so it was decided to put into Black Walnut cove, and see what the weather would do. We arrived and anchored at noon, glad to get into smooth water. Here the crab lines were gotten out, and baited; the Mate seeing some birds flying about in a field, pronounced them doves, and all eagerness, rowed ashore, taking the Fair ones (who abandoned the crabs for the time being), with him. The birds proved to be blackbirds however, so it was "stung" again. As they had been wearing bathing suits all the morning, they had a bath on the beach, and at 4 p. m., the wind having fallen somewhat, the anchor was weighed and a start made.

Turning Black Walnut point brought the wind dead ahead, and a strong ebb tide held us back, so dark fell before we made Poplar island. Mysterious lights were seen in the bay, causing much discussion, and in the midst of the argument, the Skipper ran us ashore on the South bar; fortunately we were moving slowly, the wind having gotten light, so no harm was done. The moon rose out of a bank of heavy clouds, presenting a beautiful sight, and by its light we hoped to find the buoy marking the entrance to Ferry cove. So we sailed and we sailed, with everyone looking for it in vain, until we were convinced it had been removed.

At last becoming impatient, the Skipper decided to try to go in anyhow, so the Mate was put to heaving the lead, and somehow or other we blundered into the cove at 10 o'clock p. m.; little time was wasted as every one was starved, but the dinner hour was at least fashionable even if the appetites were not; neither was much time spent on deck afterwards, nor sleep wooed in vain.

Saturday, we left the cove at 9 o'clock, (more miserable crabs on deck) and headed for home. Presently the Mate spied some boats fishing, and wanted to go to them and try his luck. He kept the glasses on them for a long time, but all he could see them catch was an occasional little "croaker;" had one of them showed even a perch, he would have insisted on stopping and having a try. He was regretting his inability to find fish, the whole trip.

We had a nice quiet sail up Eastern bay, but at Tilghman's point, we found quite a severe calm, so had lunch to pass away the time. The Mate, hoping to get a better draught in the mainsail, put his back against the boom, and walking backward along the deck, inadvertantly stepped on nothing and followed his foot into the drink, the last seen of him being a pair of wildly waving legs.

Luckily we were barely moving at the time, as his involuntary disappearance was so sudden, and his look of astonishment so comical, we were too weak with laughter to help him much, however he caught the line thrown him, and got aboard very much subdued.

(Concluded on page 241)

ONE OF THE NEW BOATS OF THE SEASON OF 1917 IS THE JUDY VII, A 46-FOOTER OWNED BY MR. WILLIAM WALLACE, OF BOSTON

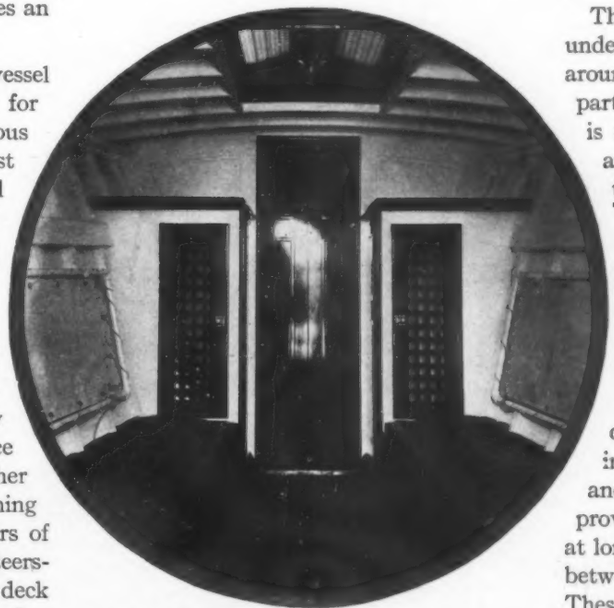
The 46-Ft. V-Bottom Cruiser, Judy VII

Built for use on Massachusetts Bay, where the weather is often boisterous, this new Hand designed V-bottom cruiser has proved to be both fast and able

ONE of the unusual boats of the season is Judy VII designed by Wm. H. Hand, Jr., for Mr. William Wallace of Boston. She is 40 ft. in length overall, has a beam of 9 ft. 6 in. and is powered with a 6¾ in. by 7½ in. Duesenberg patrol model engine which propels her at a speed of 27 miles an hour.

She is a shipshape looking little vessel and appears to have been built all for business as there are no superfluous deck fittings and, too, she sails just as fast without a military mast and its attendant rigging. The helmsman's position is most unusual, being atop of the midship deck house and well protected by a khaki covered pipe hand rail erected chest high. For a rapidly moving boat of this description this seems a logical place for the man in charge as he has a broad view of the waters about and every chance to see and to dodge driftwood and other obstructions that have a way of becoming entangled in the propellers and rudders of boats of this type, also placing the steersman in this position leaves the bridge deck entirely clear for passengers which is a fine thing. There is a cockpit aft, which, coupled with the bridge deck gives plenty of outdoor room.

Under the raised deck forward there is a main cabin finished in white and mahogany. It has the usual transom berths and in addition on each side a pipe berth that, when not in use lies, against the boat's sides, so being entirely out of the way. An unusual feature of the cabin interior and one that has much to commend it is that there is no ceiling. The inner side of the planking



THE CABIN OF JUDY VII IS A SNUG COMPARTMENT AND HAS SLEEPING ACCOMMODATIONS FOR FOUR

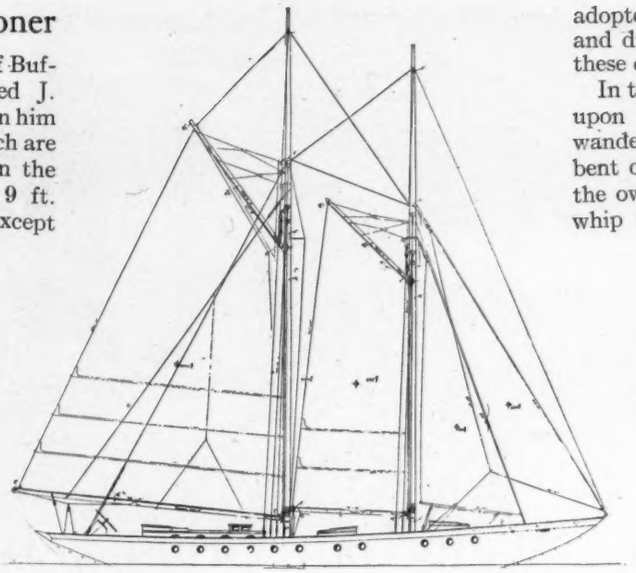
and the frames are carefully finished and painted. This in addition to saving considerable weight lessens fire hazard and so precludes all possibility of dry rot. Also, a boat that is unceiled is more easily ventilated and less apt to be damp and musty in bad weather. There is a clothes locker each side of the main cabin forward with latticed doors and a toilet room is placed forward and is fitted with the usual yacht plumbing fixtures.

The Duesenberg power plant is installed under the midships house and there is around it ample room to easily reach any part of the motor or its equipment. There is sufficient room for a pipe berth for the accommodation of the paid hand and a toilet under one of the side lockers. A small bench with a vise is installed and there are racks for machinists' tools handy so that every facility is offered for making small repairs.

This boat is of the usual or rather unusual, (for all of Hand's boats are unusual in having remarkable speed coupled with ability to make long cruises in safety and in comfort), Hand design and her construction is of the most approved type. There are sawn frames placed at long intervals with steam bent oak frames between them placed on short centers. These with numerous longitudinals give the frame unusual rigidity and so create a substantial foundation upon which to lay the planking and upon which its watertightness depends.

Judy VII is a handsome little craft with her dark topsides and joiner work in sharp contrast to the white paint of her underbody.

78-ft. Steel Auxiliary Schooner



COMMODORE Wm. J. Gunnell, of Buffalo, N. Y. recently commissioned J. Murray Watts, of Philadelphia, to design him a steel auxiliary schooner, plans of which are shown above. This yacht is 50 ft. on the water line, 18 ft. 6 in. beam, and 9 ft. draft. She is built of steel throughout, except the after deck houses. Owing to the liberal beam she has unusually good accommodations, there being a large double stateroom for the owner aft; owner's bathroom on the port side and guest's stateroom on the starboard side, and good size main saloon amidships. Forward there is another stateroom on the port side, galley on the starboard side, and crew's quarters and toilet forward. A 37 H. P. engine furnishes the auxiliary power and also drives the dynamo for the electric lighting plant.

The sail plan is quite lofty, and all the sails are practically inboard, there being no bowsprit, the jib coming right down to the stem head of the long over-hanging bow. The lower sails have an area of 2154 sq. ft. and with topsails and light sails added, there will be about 20% increase on this area. Such a boat can be handled with a very small crew, and at the same time be fast, sea-worthy and very comfortable.

The Poultry Boats of China

BOATS used for the rearing of poultry of all descriptions, but more particularly ducks, are to be found moored along the banks of all the great rivers and waterways of the Chinese Empire, and in these floating domiciles dwell the proprietors, with their entire families, kith and kin.

To our American ideas, the method adopted by the Chinese to inculcate obedience and discretion into the breasts or brains of these ducks is very curious.

In the morning, these birds are turned out upon the banks to seek their food, and wander hither and thither, following the bent of their erratic inclination. At sunset the owner, standing with a long flat-lashed whip in his hand, calls them, uttering a peculiar whistle or squall. This whip will be used most energetically upon the body of the last straggler, and dire experience has impressed this unpleasant fact upon the reasoning capabilities of the sapient ducks. The instant the call is heard, homeward hies the scrambling crew. The ducks rush at the top of their speed, tumbling rapidly forward in laudable anxiety to avoid being the last duck. The latest arrival always receives a few light blows, and no duck wants to be last.

These poultry boats are from thirty to forty feet in length, and are fitted up as domestic abodes. Over the deck is a wagon-shaped roof, made of bamboo ribs, and thatched with rice straw, under which the rowers sit upon stools, eight inches in height. The wife generally stands at the stern, moving a very long oar which works upon an iron pivot, and both steers and propels

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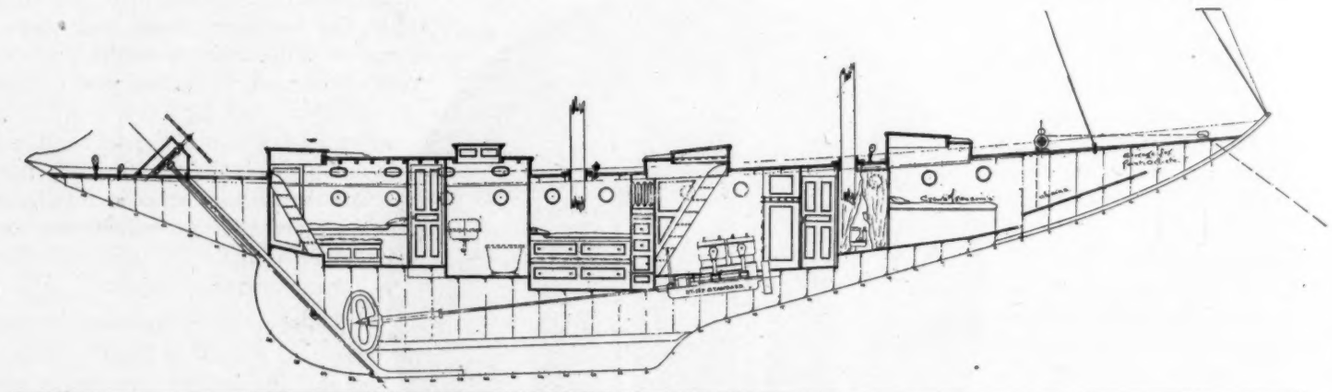
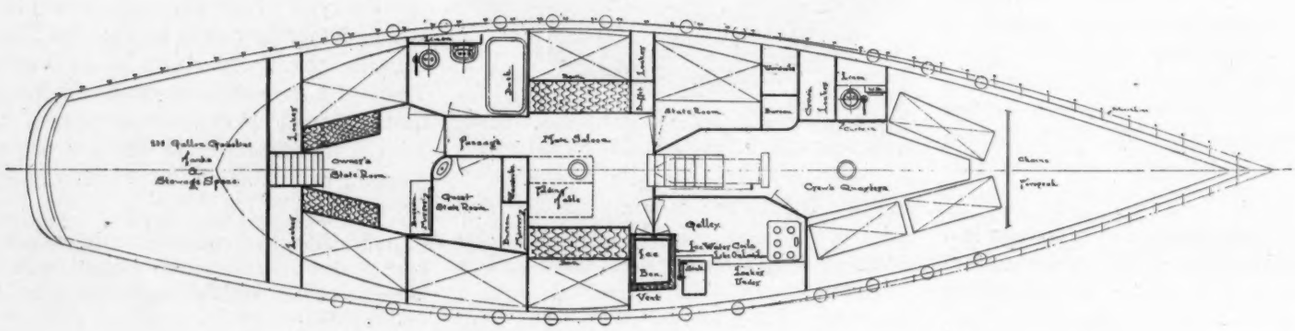
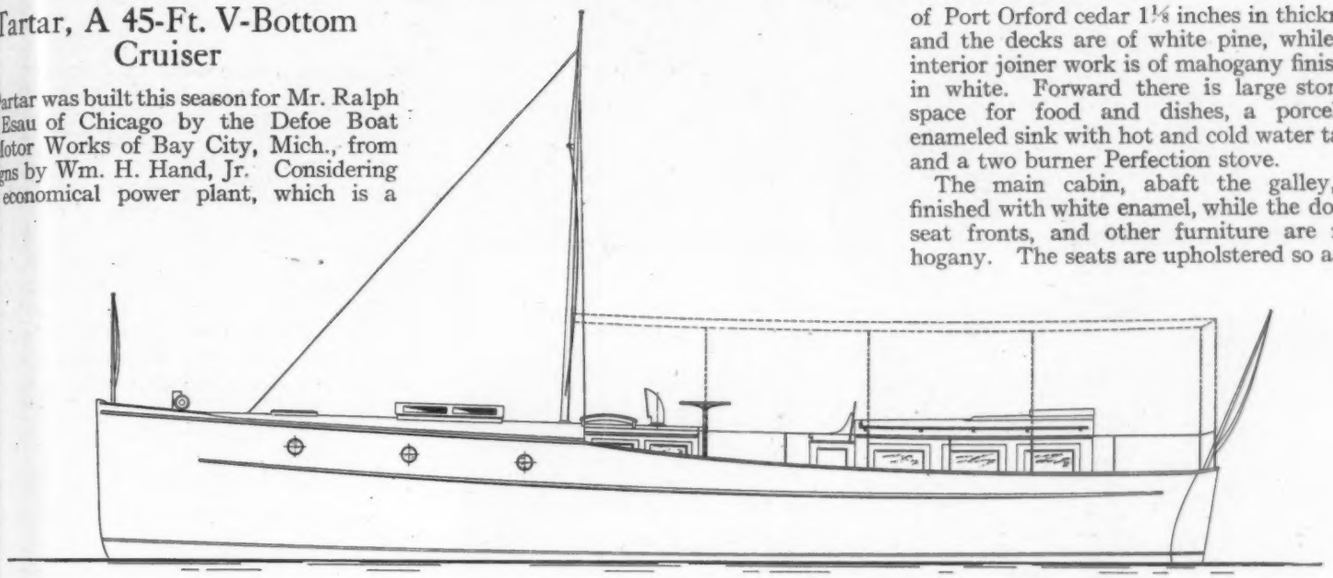
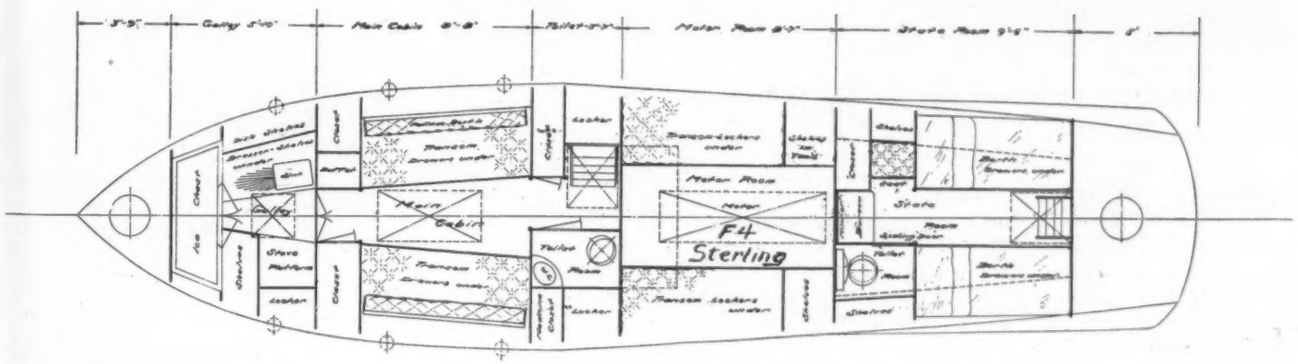




Tartar, A 45-Ft. V-Bottom Cruiser

Tartar was built this season for Mr. Ralph Esau of Chicago by the Defoe Boat Motor Works of Bay City, Mich., from igns by Wm. H. Hand, Jr. Considering economical power plant, which is a





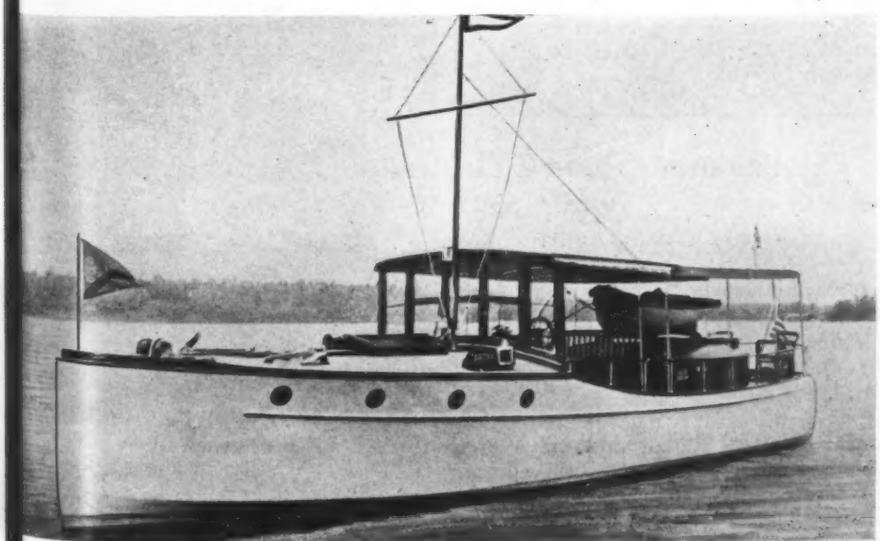
85 H. P. Sterling motor, she is remarkly fast for a boat of her type and weight, g capable of 15½ miles an hour.

The frame of the boat is of oak and Douglas fir, Douglas fir also being used for stringers and clamps. The planking is of Port Orford cedar 1⅛ inches in thickness and the decks are of white pine, while all interior joiner work is of mahogany finished in white. Forward there is large storage space for food and dishes, a porcelain enameled sink with hot and cold water taps, and a two burner Perfection stove.

The main cabin, abaft the galley, is finished with white enamel, while the doors, seat fronts, and other furniture are mahogany. The seats are upholstered so as to form upper and lower berths thus providing sleeping accommodations for four in the main cabin,and there is a drop-leaf mahogany table in the center of the cabin. The floors are covered with velvet carpet and the windows are hung with curtains of green silk rep with tan linings.

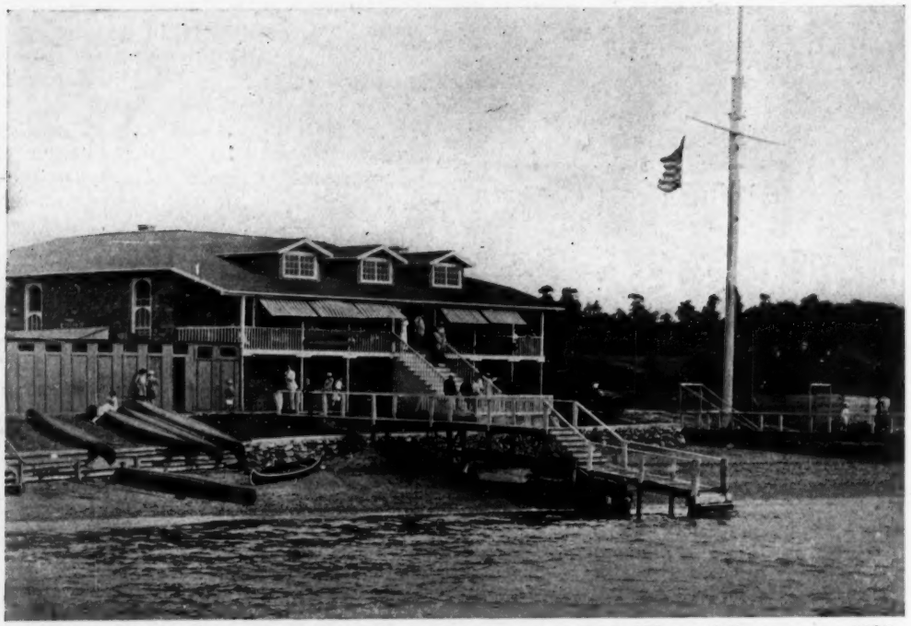
The entire after cabin is separated from the engine room by a water tight bulkhead, and forms a commodious stateroom with a toilet room in one corner. This room is finished in white enamel and mahogany and a mahogany dresser with a large mirror is built across the forward end with a clothes locker to starboard. The berths are equipped with springs and mattresses and there is more than the usual amount of drawer space below them. The bath is equipped with porcelain lavatory, and one of Goblet's best valve closets. The forward toilet opening off the main cabin is also equipped with Goblet plumbing.

The engine is placed partly under the bridge deck and partly under the trunk cabin, extending from the raised deck portion forward which gives full headroom around the forward half of the engine, while the aft half is easily accessible under the bridge deck.



THE 45-FOOT V-BOTTOM CRUISER TARTAR WAS BUILT FOR MR. RALPH ESAU, OF CHICAGO, FROM DESIGNS OF WM. H. HAND, JR. HER POWER PLANT IS A 60-85 H.P. STERLING MOTOR

Yachting and Yacht Club News



THE PORT WASHINGTON YACHT CLUB HAS A MEMBERSHIP OF BETWEEN 150 AND 160 AND SINCE 1905, THE YEAR IT WAS ORGANIZED, HAS DEVELOPED INTO ONE OF THE PRINCIPAL YACHT CLUBS OF LONG ISLAND SOUND

The Port Washington Yacht Club

The Port Washington Yacht Club which has been taking the leading part in Star Class racing this year in addition to its other activities was organized in 1905, since which time it has developed into one of the principal yacht clubs of Long Island Sound and has a membership of between 150 and 160 which, by the way, is growing rapidly. The club is in a prosperous condition and during the past year the club house was rebuilt at a cost of $10,000. In addition to yachting the organization combines country club sports, has the best bathing beach on Manhasset Bay, exceptionally well equipped tennis courts and, as the club property embraces over five acres of land, there is ample room for field sports. Last winter the members of the Port Washington Yacht Club went in for trapshooting, their facilities for this sport being of the best.

The present officers are: Commodore, Arthur T. Vance; Vice Commodore, L. B. Smull; Rear Commodore, Walter F. Blaizdell; Secretary, William Miller, and Treasurer, L'Estrang Kelly.

Shipping Board Needs Sextants

The Director of Recruiting, Mr. Henry Howard, of the U. S. Shipping Board, asks all persons having sextants which are not in use to kindly forward them to the office of the Board at the Custom House, Boston, Mass., for the use of the students of navigation.

Mr. O. S. Billings, Secretary and Treasurer, Ruskin Board of Trade, Ruskin, Fla., writes:

January 22, 1917

"I have received the first copy of YACHTING and think it is just the ARTICLE."

At The Baltimore Yacht Club

On September 15th, there was held at the Baltimore Yacht Club, a sailing race between the duck class sloops, for a silver cup awarded by Mr. Henry Daingerfield. This race was held off the Baltimore Yacht Club, over a triangular course, each leg being about a mile-and-a-half long, the course being sailed over twice.

On account of the inclement weather, only four boats entered, and only three finished within the stipulated time limit. The conditions were that the tillers should be handled by women, but a man was allowed in each boat.

The race proved to be the most exciting one of the season, the Teal and the Mallard, alternating in lead throughout the course, but the Teal with Mrs. Smallwood at the helm, finally won by one boat length ahead of the Mallard, which was sailed by Miss Mary Gray Stork. Owing to the equality in the sailing and finish between these two boats, the regatta committee decided that a prize should be awarded the sailor of the second boat, so the Club awarded a smaller but similar silver cup to Miss Stork, who sailed the Mallard finishing second by only seven seconds.

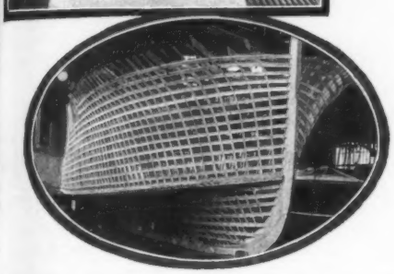
This ladies race aroused so much interest among the members and spectators, that it is contemplated holding a larger race next season.

Mischief, an Auxiliary Yawl

Designed by B. B. Crowninshield and built by Geo. Lawley & Son Corporation in 1907, the auxiliary yawl Mischief, has an overall length of 58 ft. 3 in., and a water line of 41 ft., with a beam of 12 ft. 8 in., and a draft of 8 ft. 6 in. Her owner is Mr. Bancroft C. Davis, of Auburndale, Mass.

MISCHIEF IS A HANDSOME AUXILIARY YAWL POWERED WITH A HEAVY DUTY STERLING MOTOR

and she has made many a cruise along the down east coast. She is fitted with a cylinder 6½ in. by 8 in. heavy duty Sterling motor, which drives her at a speed of 8 knots an hour.



50 Foot Express Cruiser

A CRAFT of great seaworthiness and remarkable speed; built to provide the utmost in comfort; luxuriously finished and equipt to a completeness seldom found even in cruisers of greater dimensions.

For Southern use the special attention paid to light and ventilation makes this a particularly well adapted craft. Its moderate draft allows for cruising in shallow waters; its practically indestructible hull makes for absolute safety on extended trips, even in rough weather; its commodious accommodations enable you to live aboard with every comfort provided.

Speed Range, 20 to 24 Miles Per Hour. One Man Control. Sleeps Eight and Crew of Two.

Booklet No. 555-D describes and illustrates this Cruiser in full detail. A copy will be forwarded upon application without the incurrence of any obligation.

Booklet No. 222-D describes our Forty Foot Cruiser of this same general type, accommodating a party of six and having a speed of 20 to 22 miles per hour.

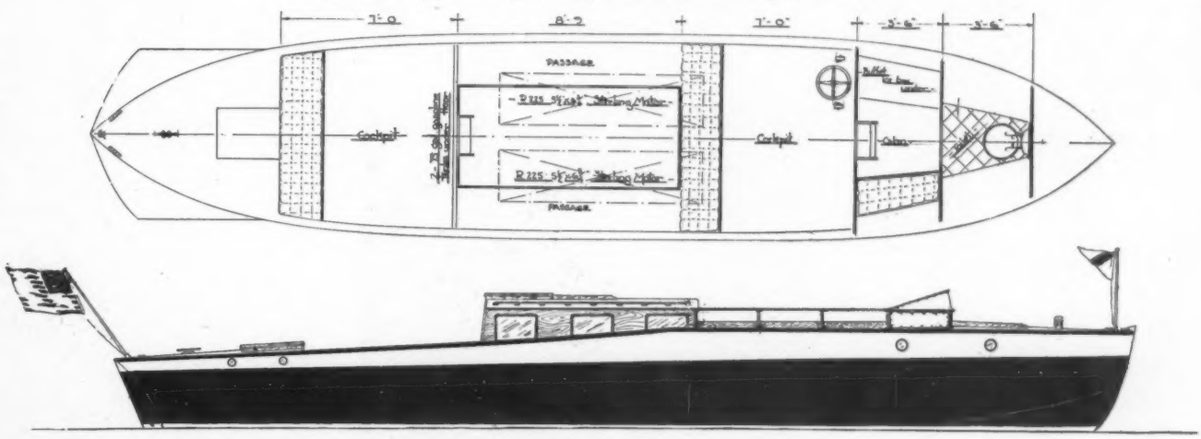
EARLY DELIVERIES MAY BE OBTAINED ON EITHER OF THESE CRAFT.

Great Lakes Boat Building Corporation

MILWAUKEE *Designers and Builders of Boats of Distinction and Quality* **WISCONSIN**

A Wave Collecting 40-Footer

A New Type Designed By the Eastern Ship Yards Co.

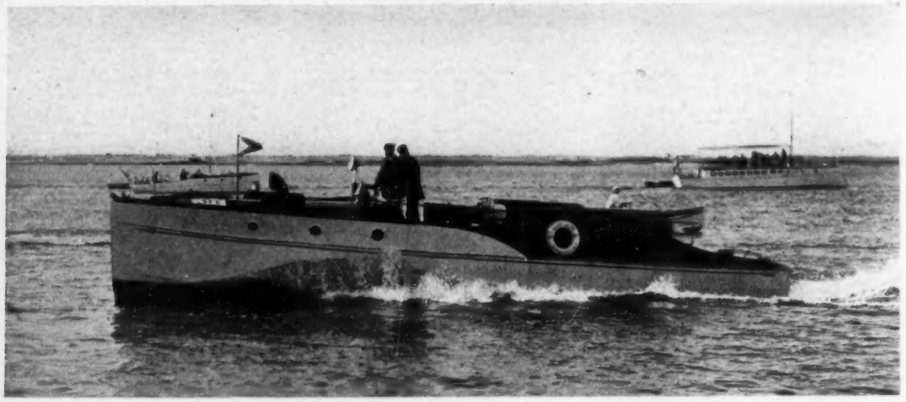


THE black and white 40-footer shown herewith is a boat of interest in that her under-water design follows the wave collecting theory to its most extreme application. In other words, although apparently she is a V-bottom type above water, she is not so below. Her chines from a point approximately one quarter of her length from the bow are deeper than her keel which makes her similar to Hickman's sea sleds. The forward sections, however, are more like the modern V-bottom boat and though perhaps they do not have the lifting power of the square-bowed typical sea sled, yet this change does away with the awkward square deck line of the former type. At the waterline aft the chines are run parallel to the center line but the deck line is drawn in sharp thus cutting away almost half the area of the boat's broad transom which is an improvement in appearance.

The specifications call for two 6-cylinder Sterling motors of 125 H. P. each. These

(*Concluded on page 241*)

Of Interest to the Skipper



MARY JANE HAS BEEN A CONSISTENT WINNER IN HER CLASS ON THE SOUTH JERSEY COAST. SHE IS POWERED WITH AN 8-CYLINDER MOTOR, AND CAN DO BETTER THAN 28 MILES AN HOUR

Mary Jane, a 40-Footer

MR. J. M. Rowland's Mary Jane was designed by A. W. Crouch and built by Stanley G. Van Sant of Atlantic City. This boat has been a consistent winner in its class on the South Jersey Coast and Mr. Rowland has been so well pleased with her, that he is now building a new 63-ft. express cruiser. Mary Jane is a 40-ft. by 9-ft. concave V-bottom express cruiser and, powered with an 8-cylinder Sterling motor; can do better than 28 miles an hour. She has very comfortable accommodations and is completely fitted and furnished for cruising. This year she has won every race in which she was entered.

A Motor Genius

Seventeen years ago in a small garage and repair shop in Rockford, Iowa, there was built a little 4-cycle motor which was exhibited at the first Chicago automobile show. Fred Duesenberg was the designer and builder of this motor and since that time he has been designing and building motors. A number of years ago he designed and built for Mr. James Pugh, of Chicago for installation in his famous Disturber IV, the fastest 40-ft. hydroplane yet built in this country, a pair of 12-cylinder motors that were the forerunners of the present well known line of Duesenberg patrol model engines.

Yachts Change Hands

The Hollis Burgess Yacht Agency has sold the following yachts: The famous schooner yacht America, original winner of the Queen Victoria Cup, now known as the America's Cup, owned by Mr. Paul Butler and Blanche Butler Ames of Lowell, Mass., to an Eastern Yacht Club Syndicate who will fit out this famous vessel and use her for yachting next season. The 50-foot water line motor boat, Tramp, owned by Dr. Arial W. George of Scituate, Mass., t Mr. Lawrence F. Percival of Marblehea Mass. The 46-foot water line auxiliar yawl, Asahi, owned by Mr. Howland S Russell of Carpinteria, California, to M Wm. Faversham, the well-known actor, fo use at Huntington, L. I. The 38-foo motor boat, Luma II, owned by Mr. H Waldo Reed of Boston to Mrs. Charles G Weld of Boston, for use at North Haven, M The 30-foot water line yawl, Waweno owned by Mr. J. W. Farwell of Cohasse Mass., to Mr. J. J. Dyer of Hingham, Mas The 30-foot motor boat, Helen, owned b Mr. J. C. McDonough of Boston, to M J. H. Andrews of Akron, Ohio, for use a Hyannisport, Mass. The 27-foot wate line sloop, Ghost, owned by Mr. C. V. Ba of Rockport, Mass., to Mr. W. E. Dohert of Marblehead, Mass. The 26-foot moto boat Mabelle, owned by Mr. Willar Welsh of Malden, Mass., to Mr. L. Sherma Adams of Boston. The sonder sloop, Par ther, owned by Mr. Walter E. Hurley South Boston, to Mr. Roy H. Walker Detroit, Mich. The 25-foot water lin sloop, Idalia, owned by Commodore Davi M. Wiseley of the Winthrop Yacht Clu to Mr. Joseph E. Elcock of Quincy, Mas The champion 18-foot water line racin sloop, Louise, owned by Mr. A. I. Whitt more of Winthrop, Mass., to Mr. Phili A. Green of Boston. The 18-foot water lin racing sloop, Bonito, owned by Mr. R. F Smith of Gloucester, Mass., to Commodor Walter B. Lane of the South Boston Yac Club. The 30-foot motor boat, Verita owned by Mr. F. B. Howard of Brockto Mass., to Mr. E. Atherton Smith of S John, New Brunswick. The 25-foot wat line auxiliary yawl, Corona, owned by M Alanson Bigelow, Jr., of Boston, to M Elton S. Wayland of Waterbury, Con The 24-foot water line knockabout, Chu Sa owned by Mr. R. E. Pope of Marblehea to Mr. Joseph Allen of New York. The 2 foot auxiliary catboat, Grace, owned b Mr. John Manahan of Milton, Mass., Mr. Henry Bergh of East Hampton, L. The 18-foot water line sloop, Dormi owned by Mr. G. D. Hartshorn of Taunto Mass., to Mr. John P. Harrington of Sout Boston. The same agency has also cha tered the 55-foot motor boat, Alsorie II owned by Mr. C. Neal Burnell of Bosto to Mr. Frank B. McQuestin of Boston an the 50-foot motor boat, Gull, owned b Mr. C. A. Cunningham of Boston to M Louis K. Liggett of Boston.

MR. FRED DUESENBERG

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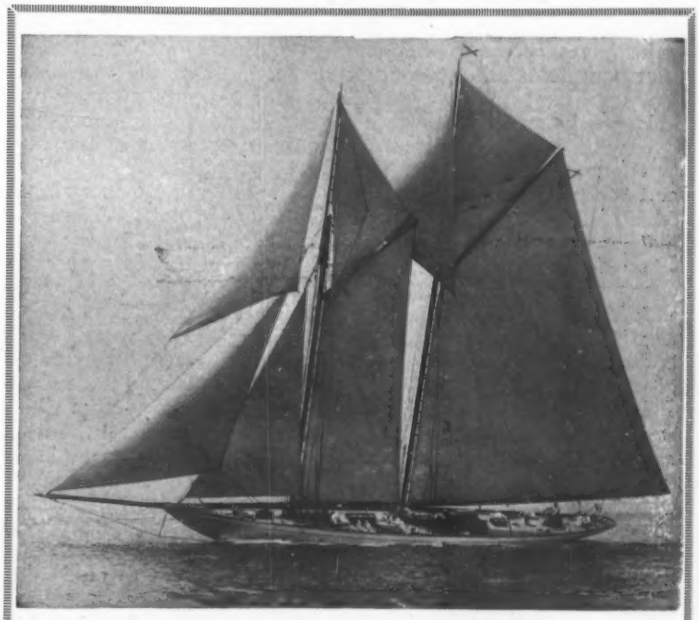

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Leather, even at its best, is imperfect. It exhibits all the natural and accidental markings of the animal's life-time. Almost invariably there are lumps, pimples, bruises, scabs, scars, brands or wire scratches upon it. It is too thick in some places, too thin in others. It may be perforated with grub holes or weakened by disease; it is often poorly or insufficiently tanned, and being an animal substance is always slowly decomposing and disintegrating. This internal condition is aggravated by its extremely porous nature, causing it to absorb dust, grease, sweat, water or fluids of any kind.

There are no such imperfections in fabrikoid. The fabric base of Craftsman Quality is inspected at the mills and the fabrikoid plant before it is dyed. The number and size of threads in the warp and woof and the tensile strength must be up to specifications. The tests to establish this are made on the Fabrikoid Company's apparatus. Craftsman Quality will test almost twice as strong as ordinary split leather, and in a series of comparative tests with "grain" leather it proved to be nearly 40 per cent. stronger, showing an average tensile strength of 114 lbs. to the inch against an average of 106 lbs. for "grain" leather. The tearing strength of Fabrikoid—the strength required to tear it after a tear has been started—averages 33 lbs., against 21 lbs. for split leather, a considerable difference.

Once satisfied with the strength of the fabric they proceed with the processes of shrinking and dyeing it. As a result of painstaking methods they can guarantee that fabrikoid will not shrink in service. The dyes used are always the best obtainable; many are of their own make. The pyroxylin is also their own manufacture throughout; likewise, the cotton solvents and many of the pigments. The woven base of fabrikoid is coated in specially designed machinery and inspected with each successive coating. Each coating is specially compounded and properly placed so that the impregnating, the softening and the wearing portions of the film bear the relations necessary in a scientific piece of goods.

That Craftsman Quality Fabrikoid will stand up under careful tests and give the maximum service value has been fully demonstrated by the U. S. Government, who have officially adopted it for all the vessels being contracted for by the emergency fleet corporation, and made it the U. S. Standard ship upholstery material. It is also being used in upholstering the new aeroplanes. This recognition by the U. S. Government of leather substitutes is far-reaching in its effects and points the way to manufacturers all along the line who have heretofore felt obliged to use leather for upholstery purposes. Of course, the more uses found for fabrikoid, the more real leather manufacturers will have for the indispensable requirements of shoes, harness, saddles, belting, etc.

WEARING AN EVER-WARM SAFETY-SUIT ONE MAY JUMP OVERBOARD FULLY CLOTHED WITH IMMUNITY

Owes His Life to an Ever-Warm Safety-Suit

Mr. Chester Beecroft is one of the only American commercial travellers whose passport shows the successful entrance and departure to and from England and France, a return to and second departure from England, then Norway, Sweden, Denmark, Finland, and Russia during the last few years of the war. During these trips Mr. Beecroft passed through the majority of the most dangerous submarine and mined areas in the world, including two through St. George's Channel, two across the Straits of Dover and one through the Irish Sea and North Atlantic, twice through the North Sea and once through the Skaggerack and Categat. In the course of these voyages, some of which were made in small freight boats under the most trying circumstances, the vessels upon which Mr. Beecroft travelled were twice attacked and one was sunk by a submarine.

Any man who goes to Europe these days needs all the insurance he can get and then —so he won't have to cash in on that insurance—if he wants to come home alive there is practically only one way he can do it. That is to wear an ever-warm safety suit. Mr. Beecroft fortunately was provided with one of these suits and having been brought ashore from a torpedoed ship after being in the water for four hours he says: "If it had not been for the Ever-Warm Safety-Suit, I likely would have shared the fate of many who were drowned."

Before you make arrangements to go abroad or to sail on any large body of water learn something about these suits. They are as much superior to the old-fashioned life preserver as are vessels of today to the ships of the Vikings. These suits are made and sold by the International Life Suit Corporation on the tenth floor of 11 Broadway, New York, N. Y.

The New Duesenberg Catalog

The Duesenberg Motors Corp., of Elizabeth, N. J. has recently issued a very handsome catalog. It is superbly illustrated with a collection of the finest and fastest high speed day cruisers and patrol boats ever built in addition to a number of decorative pieces, and illustrations of 6 and 8-cylinder patrol model Duesenberg motors, including descriptive specifications covering the marine motors built by the Duesenberg Corporation.

This interesting catalog was designed and written by Mr. Rex W. Wadman who makes a specialty of technical advertising of this description. The Duesenberg Motors Corporation will be glad to have YACHTING's readers send for a copy of this catalog.

Anado

(*Concluded from page 210*)

the remarkable boats of the year, not particularly for her size, nor her speed, but rather for elaborate installation of modern marine apparatus and equipment. This as planned consisted of a powerful electric generating set installed in the motor room which supplied electricity for the operation of all the pumps including those for fire, bilge and fresh water. All of the bathroom fittings were to be electrically operated and so arranged that by the simple turning of a switch either hot or cold, fresh or sea water, could be obtained. All of the interior furnishings were planned to be the very finest, and the owner not being content with the usual bell signal to the steward's department and the engine room or the bridge deck had planned to have telephones installed. The construction follows the latest practice. The planking is double while the material is yellow pine, it being copper riveted over white oak frames. The keel, floors, stringers, and other structural members are either of white oak or yellow pine and the decks are of white pine, laid fore and aft, left bright to be kept white and clean by the brisk application of holystone and elbow grease on the part of the crew. The joiner work is of African mahogany rubbed to a satin gloss.

Twin 8-cylinder Speedway motors propel the boat at a cruising speed of 18½ miles. With all this equipment installed the motor room is a prosperous compartment. Separated from the rest of the vessel are watertight bulkheads located practically amidships. Copper gasolene tanks are installed under the bridge deck and have a capacity of 750 gallons. Before Anado was completely finished Mr. Mollenhauer offered her to the Navy Department at a nominal charter basis and his offer was immediately accepted and so she is now in the Sectional Patrol Service.

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For baby's dressing table or the boudoir of the more mature nothing could be more appropriate than a toilet set of this most dainty material. The better stores show a wide selection. Brochure upon request.

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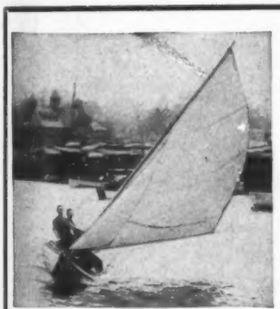

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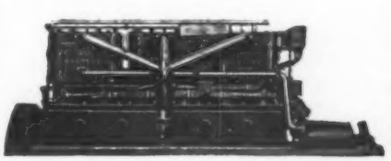

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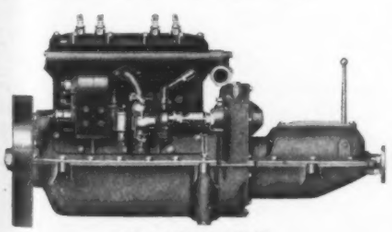

Model F 12-15 H. P.

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A 5% advance went into effect September 20th.
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THE most practical and useful book extant on the selection, care and use of a sail boat. The author has handled all styles of boats, large and small, and he draws on his large fund of experience for information and advice that the boat owner will hail with delight, for it will solve his many knotty problems and give him the maximum pleasure and sport from his struggles with the uncertain elements of water and wind. Concise, meaty.

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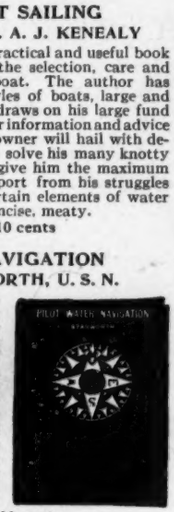

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REVERSE GEARS
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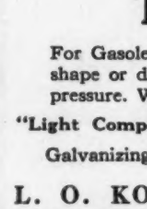

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"Light Competition Work Not Wanted"
Galvanizing of all kinds of marine work.
L. O. KOVEN & BROTHER
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Sachem, a Ninety-Foot Cruiser

(Concluded from page 217)

and extends the full width of the vessel. On each side is a transom 6 feet 8 inches long, by 18 inches wide, provided with spring cushions and having two drawers underneath. In this stateroom is a desk, a chest of drawers, bureau, dressing table and a brass bed. There is a connecting bath room on the port side and a wardrobe on the starboard side. Abaft this appartment is the lobby followed by a toilet room on the starboard side with a stateroom to the port. The after stateroom is 8 feet 4 inches in length and extends the full width of the vessel and is provided with lavatory, wardrobes and a dressing table.

The deck house is 20 feet 4 inches long, and is constructed of mahogany inside and outside. The pantry is located in the after end of the deck house on the port side and is 7 feet wide by 7 feet fore and aft and to starboard is a passage with locker for oilskins, etc.

The steering bridge is immediately abaft the deck house, and aft of this is a conventional ventilating stack. All outside joiner work, the skylights, companionway, and wooden deck fixtures are of mahogany. The planksheer, as well as the rails, are of like material.

The yacht is lighted throughout by electricity, which is supplied by a 6-cylinder Winton generating set of 5 K. W. capacity. A large storage battery also is supplied, and the yacht is provided with electric heaters. There are two gasolene tanks having a total capacity of 1,000 gallons.

A Convertible Cruiser

(Concluded from page 223)

forward in the shallow well ahead of the chart and dining room.

The overall length of the boat is 130 feet, beam 16 feet and draft 5 feet 6 inches. She is constructed entirely of steel even to the deck houses and the builders have made every effort to produce a powerful and substantial vessel capable of keeping the sea in any weather. The motors installed are identical to those forming the power plants of Sabalo, Tarantula, Mauna Loa, Whirlwind, and Privateer, five of the largest gasolene propelled patrol boats in the government service. Mr. Kiser plans to enroll this unusual craft in the Navy's fleet of so-called submarine chasers.

The Poultry Boats of China

(Concluded from page 228)

the boat. She guides the boat and attends to other household duties. Frequently an infant is hanging at her back, suspended in a cotton bandage, while other children of various ages gambol at her feet. The younger children have gaudily painted gourds attached to their backs. These gourds are to serve as life buoys should the children tumble overboard. Although this precaution is taken for the safety of their children, a Chinaman would not attempt to rescue another from a watery grave owing to the superstition they entertain. In common with some Scandinavian tribes, they believe that a person rescued from drowning will inevitably injure his preserver.

In one compartment of the boat is their household joss or idol, with incense, in the form of joss sticks, perpetually burning before him, while moral maxims and inscriptions on various colored papers, with tinsel decorations, hang about the domestic shrine; and Joss, always portly, looks peculiarly contented and comfortable in his abode. Night and morning they "chin-chin Joss"—worship the idol—honoring him by beating gongs and burning paper offerings cut into the shapes of animals, fruits and money.

A vegetable garden is frequently suspended over the side of the boat and attached to it by cords; the frame of this floating garden is composed of bamboos, and covered over with a layer of earth, and thus they have culinary herbs always at hand. The center of the boat is provided with a small tank, in which they keep and fatten their fish, and their provision of rice is suspended in mat bags from the roof of the boat, which is made upon the telescopic principle, the one portion sliding within the other. At night they draw the roof out to its fullest extent, fasten mats at either extremity, to exclude the air or inquisitive eyes; spread their mats on the deck, their only bed, and place their heads on rattan, wooden or earthenware pillows, while the poultry are quietly roosting in their bamboo cages at the farther end of the boat.

JEAN MATEER BEEMAN in *Forward*.

Starting Troubles Cured

Nearly all the other common causes of difficulty in starting can be overcome by the self-starter, such as any stiffness in the magneto (the rocker arm sticking or the carbon brush making temporarily bad contact), and the point which it is desired to make from this is that, apart from the question of general convenience and as a labor-saving device of the first order, the self-starter, in spite of the extra cost it adds to a motor, is actually a good commercial proposition owing to the time it saves. Admittedly, if it did nothing but save the expenditure of a little human energy there would not be much to say for it in commercial motor craft; but where, as indicated above, it can actually save a great deal of valuable time, and also act as a great safeguard against accidents due to the speed with which an engine fitted with a self-starter can be put into action, it is well worth the extra expenditure which it necessitates. An accidental stoppage of a motor and inability to start up at once have often been the cause of serious damage to boats, which is perfectly well avoided by fitting a mechanical starter.

Consult YACHTING'S Information Department on any of your problems. Its service is absolutely free.

Shipmates Four

(Concluded from page 226)

We floated and occasionally sailed along, and were inspected by a youth, and "cutie" of uncertain age, on a motor boat. Finally we picked up a breeze which carried us home, arriving at 5.30 p. m. We found the house full of guests, so dined and slept aboard the old ship again, glad of a reasonably good excuse to have another night afloat.

In a couple of days the visitors had returned to their homes, carrying many pleasant memories of the summer's outing to talk over during the winter's evenings, but the Skipper felt very lonely the day he lost his Shipmates.

Captain Morris

has written a number of cruising stories for YACHTING and in an early issue we will publish Part II of

Shipmates Four

A Wave Collecting 40-Footer

(Concluded from page 231)

will be installed under the amidships house and will be completely equipped with electric starting and lighting apparatus. With these the boat's speed will be 30 miles an hour.

As the boat is planned only for use as a day boat no accommodations are provided for cruising. However, there is a small cabin forward in which one may find shelter in very rough weather or during a summer rain storm. Opening from this cabin is a completely equipped toilet room. There is lots of outdoor space on the boat, it being equally divided between the forward and after cockpits. An unusual feature of the craft is the passageway on each side of the engine house, this being on the same level as the cockpit floor.

The boat's frame will be of oak there being sawn frames placed at 3-ft. centers and steam bent frames between them at 6-in. centers. Numerous stringers and seam battens running fore and aft provide longitudinal strength which, with the addition of diagonal double planking create unusually strong construction.

The boat will be painted black outside between the waterline and the plank sheer, and painted white below the waterline and above the plank sheer with the exception of the black rub strake along the deck line and the joiner work and decks which will be painted gray.

SOLDIER OR CITIZEN!

Every one of us must do his bit and be ready to do more. Every man should be fit. Every man should know something about guns, shooting, camping and outdoor life in general. The more useful you are to Uncle Sam, the higher your position and the greater your authority. The most practical books we know are:

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Yours sincerely,
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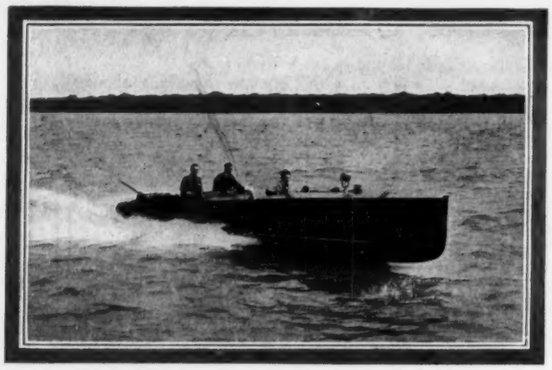

Firenze, 32′, built by John L. Hacker, Detroit, for Mr. Bradford Shinkle. Powered with Model F 4 Cylinder 5½″ bore x 6¾″ stroke 100 H.P. Sterling engine. Speed 32.2 M.P.H.

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THE ENGINE of REFINEMENT
For the finest boats that float

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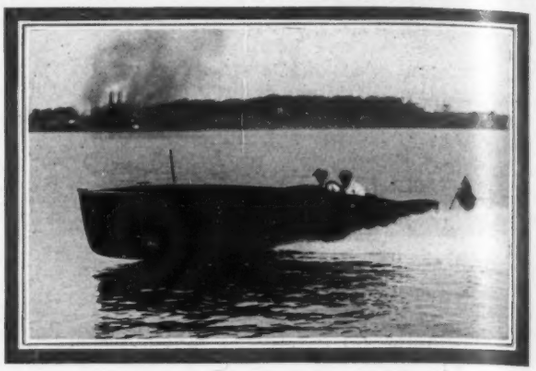

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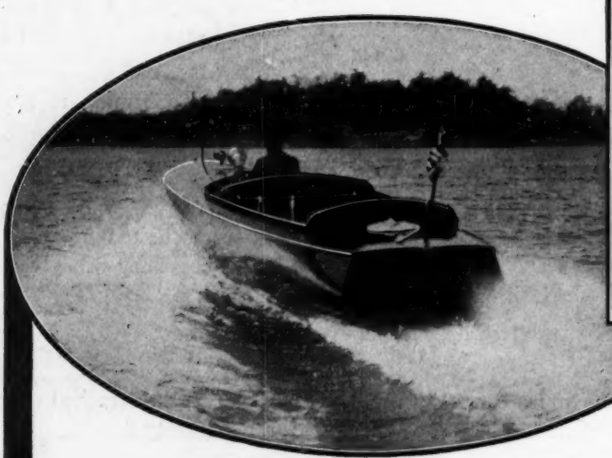

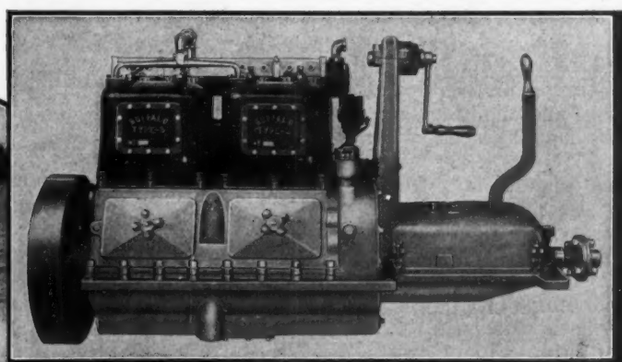

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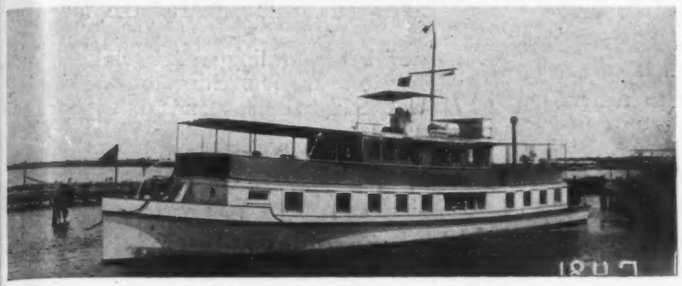
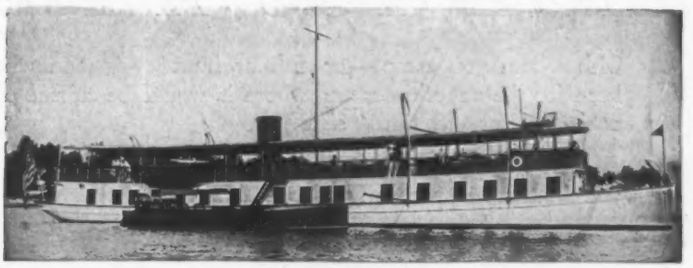
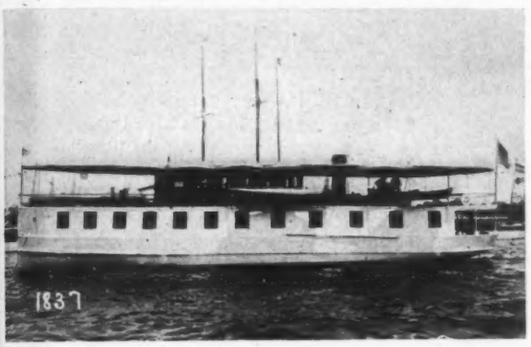


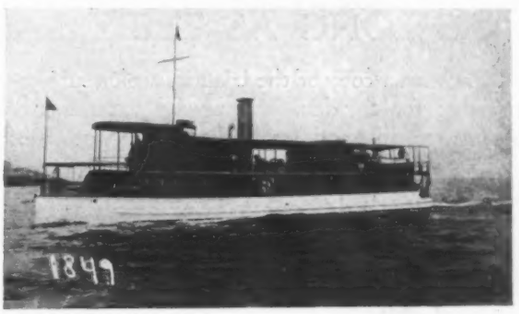
NO. 1847—SALE—CHARTER—Shallow draft houseboat, 85 feet over all, 18 feet beam and 28 inches draft—75 H. P. Standard motors, speed 10 miles, heated by hot water, and lighted by electricity; 4 staterooms, bathroom, 2 saloons, etc. Full particulars from Tams, Lemoine & Crane, 52 Pine Street, New York.



NO. 1848—SALE—CHARTER.—Modern houseboat, ideally suited for southern waters, 123 x 115 x 17.8 x 3.4 ft.; 2 Standard motors, 4 large staterooms, 2 bathrooms, saloon; very large shade deck; lighted by electricity and has new ice machine. Full particulars from Tams, Lemoine & Crane, 52 Pine St., New York.



NO. 1837—SALE—CHARTER: Commodious houseboat, 87 feet over all, 23 feet beam, 4 feet 7 inches draft. Twin-screw, two new 70 H. P. Buffalo motors, 5 large staterooms, dining saloon and deck saloon, 2 bathrooms; electric light, etc. Plans and complete particulars from Tams, Lemoine & Crane, 52 Pine Street, New York.



NO. 1849—CHARTER — Desirable houseboat, 115 x 17 x 3 feet 6 inches draft. Speed 12 miles, 5 staterooms, 3 bathrooms, main saloon, dining saloon, smoking and sitting room. Further particulars from Tams, Lemoine & Crane, 52 Pine Street, New York.

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2 inch heart pine planking, white oak; timbers spaced 8 inches between centers; double timbered to 10 x 12 kelson. Has bilge keels; iron faced guard rail all around. Powered with 50 h.p. 4 cylinder Globe Engine, practically new. New Delco Ignition, also, Edison storage battery. Bronze propeller. Very powerful and very strongly built. Has always passed Marine Steamboat Inspection for Passenger Service. Has fire pump; one metal life boat, and is provided with 20 life preservers. Speed is actual 12 miles. Has 2 toilets, 2 stationery wash bowls and running water. Electric lights, galley with "shipmate" range and ice box. Pilot house natural wood; cabins finished in white enamel. Has mahogany dresser in forward cabin and mahogany buffet after cabin. Furnished with "Sunfast" Rep curtains, best hair cushions, and is complete in every detail. Has signal mast with yard arm. All necessary lights, 2 anchors, cables, has been newly painted and is in shape to run at once. Has capacity for 250 gals. gasoline and 300 gals. fresh water. Can sleep 6 comfortably. Is an unusually able, satisfactory boat. Inspectable at Hampton Roads. For terms and further description, address, GEO. F. ADAMS, Mgr., Hotel Chamberlin, Fortress Monroe, Va.

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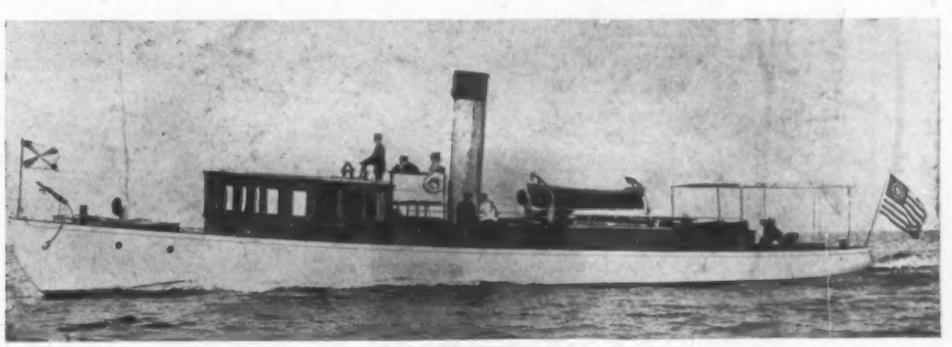

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The Lighthouse

Grannie has kissed me and heard my prayers,
Smoothed all the bedclothes cosy and right,
And now she has gone away far downstairs,
Taken the candle and shut the door tight.

The wind is howling and growling about,
The waves are quarrelling, cross as can be,
But the Lighthouse stands on the rocks far out,
It shines on the waves and it shines on me.

What would the poor little fishing-boats do?
How would they know the right path to take?
How could the ships sail straight and true,
S'posing the Lighthouse wasn't awake?

I'd be afraid of the lonely night,
I'd be afraid of the cold and the storm
'Cept for the friendly Lighthouse's light—
Somehow it makes me happy and warm.

No one would hear me if I should call
(How the Sea scolds on the beach below!),
No one's awake in the world at all—
Grannie and Nurse are asleep, I know.

Down by the fire, like they always do,
Grannie and Grandfather doze and nod;
But the Lighthouse watches the whole night through,
And it seems to me like the Eye of God.

RUTH M. BEDFORD,
In *The Mariner's Advocate.*

Trapshooting at the New York Athletic Club

The Athletic Committee of the New York Athletic Club has arranged the holding of trapshooting events at Travers Island, New York for the season of 1917-18. In view of the conditions existing as a result of the war, certain modifications in the program of events held in other years All Sunday shooting will be discontinued, all the distance and many of the novice events, and the awarding of straight run medals and links. However, the Haslin and Club Cups will be continued as monthly cups. The Travers Island Trophy will hereafter be held as a monthly cup to give number of legs in each month to win. Winners of legs to be determined on each club day on all ties to be shot off in special events of 25 targets unless otherwise mutually agreed upon by the contestants tied.

Contestants tied will be allowed the handicaps to which they are entitled on the day of the shoot off and no cut shall be made in the handicap until the winner of the leg is determined. Straight scores shall take preference over those that are not, and all contestants tied with straight scores shall decide the tie by a shoot off. The Travers Island Leg Trophies will be awarded each club day to winners of legs each month and the season trophies as in past years will be continued.

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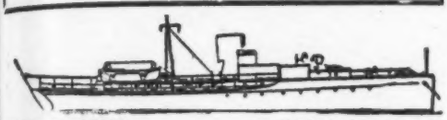

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